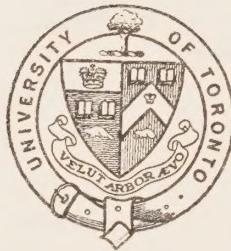




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# ROYAL COMMISSION

ON

## GREAT SLAVE LAKE RAILWAY

### HEARINGS

HELD AT

EDMONTON, ALBERTA

VOLUME No.: 6

DATE:

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ROYAL COMMISSION ON  
THE GREAT SLAVE LAKE RAILWAY

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Hearings of the Royal Commission on  
the Great Slave Lake Railway held  
at Edmonton, Alberta, at the Court  
House, at 10.00 a.m., September 16,  
1959

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PRESENT:

MR. M. E. MANNING Chairman

MR. WALTER D. GAINER Member

MR. JOHN ANDERSON-THOMPSON Member

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MR. FRANCIS M. FEEHAN Counsel

MR. A. PATERSON Secretary

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SUBMISSION OF  
URANIUM CITY CHAMBER OF COMMERCE

## Appearances:

Mr. D. L. Campbell	Counsellor, Gunnar Mines, Uranium City
Mr. J. M. McMeekan	Uranium City Chamber of Commerce

THE CHAIRMAN: Mr. Campbell, you are present-  
ing the brief, are you?

MR. CAMPBELL: That is right.

THE CHAIRMAN: For Uranium City Chamber of  
Commerce?

MR. CAMPBELL: Yes.

THE CHAIRMAN: Would you like to read it from where you are sitting, or would you like to come up to the witness box?

MR. CAMPBELL: I would prefer standing here if that is . . .

THE CHAIRMAN: That is fine. As you know, you are at liberty to comment on it as you go along.

MR. CAMPBELL: Yes; and any questions I would like to refer to my colleague Mr. McMeekan here. Is that all right?

THE CHAIRMAN: That is first rate; and I am delighted to see Mr. McMeekan here.





MR. CAMPBELL: This, of course, is a brief concerning the Great Slave Lake railway by the Uranium City Chamber of Commerce.

The Uranium City Chamber of Commerce presents the following information to show why it is in favour of the Great Slave Lake Railway starting at McMurray, Alberta, and going north to the Pine Point area in the Northwest Territories.

#### Location

Uranium City is located on the north shore of Lake Athabasca in the northwest corner of the Province of Saskatchewan, 30 miles south of the 60th parallel. It is 450 air miles from Edmonton, Alberta, and Prince Albert, Saskatchewan.

#### History

Till the year 1930 the area was uninhabited and virtually unexplored. There were only wandering Indian bands and a few white trappers. Gold was discovered in 1933 and production commenced at the Box Mine of The Consolidated Mining and Smelting Company of Canada Limited. The mine was closed in 1942.

THE CHAIRMAN: Why was it closed?

MR. CAMPBELL: I presume it was the cost -- the high cost of shipping into the country at that time, with the low cost of ore, prohibited production. They just had to close it down.

THE CHAIRMAN: It has never been opened again?





MR. CAMPBELL: It has never been opened again.

MR. McMEEKAN: There was a great shortage of labour during the period and that, added to the economic factor of dropping cost ratio between gold and other commodities, made it unfeasible to produce.

THE CHAIRMAN: And that is still the situation?

MR. McMEEKAN: That is still the situation. The mine has now been considered as written off.

THE CHAIRMAN: Written off entirely?

MR. McMEEKAN: To be truthful, they have withdrawn their caretaker.

MR. CAMPBELL: There is a slight possibility that in the event of an increase in gold prices that country would become favourable again, and if the cost of transportation to these parts of the country were reduced so that they could make a profit I imagine the gold companies would consider operating.

THE CHAIRMAN: As they do any place else?

MR. McMEEKAN: Consolidated still retains a few claims there. They still have their buildings there. But the mine is inoperative, and under present conditions is probably inoperable as a gold mine.

THE CHAIRMAN: And even the caretaker is withdrawn?

MR. McMEEKAN: Yes.

COMMISSIONER THOMPSON: Did you say 1935 or 1936?





MR. CAMPBELL: 1935 -- I have it here.

COMMISSIONER THOMPSON: It didn't go into production in 1935?

MR. McMEEKAN: They were preparing for production at that time.

COMMISSIONER THOMPSON: When did they actually start producing? That wasn't until 1937, was it?

MR. CAMPBELL: It could be.

MR. McMEEKAN: I was in there in 1936 and they were about ready.

COMMISSIONER THOMPSON: I thought it was 1937; but I don't think it matters much.

MR. CAMPBELL: This is something added on to this brief which is submitted. It only says 1933 as the date of the discovery, and it doesn't say when operations were commenced.

COMMISSIONER THOMPSON: I think it was 1937.

MR. CAMPBELL: That could be right.

In 1946 Eldorado Mining and Refining Limited (a Crown corporation) started extensive exploration in the area looking for radioactive metals. They started milling operations in 1953 at their Ace Lake property. In 1959 there are three mills located within the municipal corporation of Uranium City and District. These are Eldorado Mining and Refining Limited, (2,000 tons a day capacity), Gunnar Mines Limited (2,000 tons), and Lorado Uranium Mines Limited, a custom mill, (750 tons).





THE CHAIRMAN: Those are the capacities?

MR. CAMPBELL: Yes.

THE CHAIRMAN: At what rate are they producing now?

MR. CAMPBELL: At full capacity.

MR. McMEEKAN: Lorado is a custom operation.

MR. CAMPBELL: If they had more capacity I suppose they would produce more.

There are also the following producing mines, Eldorado Mining and Refining Limited, Gunnar Mines Limited, Lorado Uranium Mines Limited, Cayzor Athabasca Mines Limited, Rix Athabasca Uranium Mines Limited, Lake Cinch Mines Limited, and other small mines.

The "other small mines" noted are probably high-grading operations that are carried on at the present time.

The present population of the area is 5,500 persons. There are 26 school rooms and a modern hospital.

#### Transportation

Water: During the summer months June 1st to September 30th the Northern Transportation Company Limited (A Canadian Crown corporation) operates a fleet of diesel tugs and barges from Waterways, Alberta, to the end of steel on the N.A.R. to Uranium City, a distance of 265 miles. The rate for freight is about one cent a pound. The time required for the trip, two days.





That is two days each way -- that is four days total.

During 1958, 91000 tons were delivered and 2,000 tons shipped out.

That is transportation by the Crown Corporation, Northern Transportation. That is, they operate six barges and one tug on the river.

These figures do not include the 35,000 tons that Gunnar Mines Limited brought in on their own barges.

Air: Pacific Western Airlines fly from Edmonton via McMurray daily except Sunday. Their scheduled time is three hours fifteen minutes. Their equipment C-46's and a DC-4. Rates are air express 24 cents a pound, air freight 12 cents a pound.

Outgoing rates air express 12 cents a pound and air freight 6 cents a pound.

Saskatchewan Government Airways fly from Prince Albert daily except Sunday. Their time is three hours and fifteen minutes and their equipment is DC-3's. Rates are air express 30 cents a pound and air freight 12 cents a pound.

Ground - 1959: There are no road connections with any outside places. During the winters of 1957-58 and 1958-59 some trucks made the trip from Meadow Lake over a winter road. The Province of Saskatchewan had given some financial assistance to clear the right-of-way. The route was not





practical and has been abandoned. The rate for freight by truck was 7 cents.

THE CHAIRMAN: Would you mind if I interrupted you for a minute?

MR. CAMPBELL: No, go ahead.

THE CHAIRMAN: There was some evidence given to us about a winter road, I believe, from McMurray north towards Lake Athabasca. Do you know anything about that?

MR. CAMPBELL: I do know something about that, but I would like to call on my friend Mr. McMeekan to explain that to you.

THE CHAIRMAN: Yes, Mr. McMeekan.

MR. McMEEKAN: This road, of course, is not mentioned here; but that road was put down, I think, three winters ago, and was actually in existence as a tote road -- a very rough tote road -- which winds up at Old Fort Bay on the west end of Lake Athabasca, on the south shore.

That was, to the best of my recollection, a road sponsored by the provincial government of the Province of Alberta; and, as I said, it was a very rough winter tote road, or tractor road.

Unfortunately, when they had it finished the camp burned down and, to the best of my knowledge, no more than one load has ever gone through on that road.

THE CHAIRMAN: Is it a road that would be satisfactory only for tractors?





MR. McMEEKAN: Yes, it would.

THE CHAIRMAN: Trucks couldn't make use of it?

MR. McMEEKAN: No, I don't think that trucks could possibly tackle it in its present condition.

MR. CAMPBELL: Does it utilize the lake to some extent?

MR. McMEEKAN: No -- I think it is all overland; I am not clear about the exact route of it.

THE CHAIRMAN: Where was it you said it ended up?

MR. McMEEKAN: It ends up at the Old Fort Bay.

THE CHAIRMAN: That is . . . ?

MR. McMEEKAN: . . . on the extreme west end of Lake Athabasca, on the south shore.

THE CHAIRMAN: The extreme west end of Lake Athabasca?

COMMISSIONER THOMPSON: The road, I take it, is on the east side of the lake all the way down?

MR. McMEEKAN: That is right.

MR. CAMPBELL: Does it pass Athabasca?

MR. McMEEKAN: No.

MR. CAMPBELL: On the east side of Athabasca River.

THE CHAIRMAN: What is Lake Athabasca like in the winter time for transportation? Do you have the same problems . . . ?

MR. McMEEKAN: We have the same problems that they have on any northern lake of any size.





You have pressure ridges which, on towards the spring, are great hazards to transportation. But with modern equipment and reasoned and sensible use of the highways for transportation the danger here can be minimized. They are not as bad as they were. For example, Mr. Thompson must remember when trading was into Yellowknife over the ice and there were a great many accidents. Furthermore, Athabasca Lake is not nearly as big a lake as Great Slave Lake and the pressure ridges can't form such a hazard.

That being the case I would say it is a fairly good medium for winter transportation -- a fairly good surface for winter transportation -- during, say, three months.

THE CHAIRMAN: A good surface for transportation for three months?

MR. McMEEKAN: Reasonably good; two to three months, depending on the season.

THE CHAIRMAN: What months are those?

MR. McMEEKAN: Well, the lake freezes about -- it would be from mid-January to mid-March, would be the best time, I think, depending on the season. It could be extended further on into the spring, but mid-January would be the earliest time for it to be used with safety.

THE CHAIRMAN: How long would it be?

MR. McMEEKAN: Less than a hundred miles.

THE CHAIRMAN: On the lake?





MR. McMEEKAN: Approximately a hundred miles.

THE CHAIRMAN: What would be the total distance from McMurray to Uranium City, going by the tote road?

MR. McMEEKAN: It would be approximately the same distance as the water route, which is 265 miles. I would say 250 to 270 miles.

THE CHAIRMAN: That would be the overland winter route?

MR. McMEEKAN: Yes, that is correct.

Of course, I should say in elaboration of that, that I personally, and many of the people who are acquainted with freezing conditions and general conditions in the North don't figure that to be a very feasible route.

THE CHAIRMAN: Why not?

MR. McMEEKAN: Well, on account of the fact that the whole . . . it is a little difficult to explain. The terrain is good, but it is not considered to be good practice to use . . .

You have rather thrown me! It is difficult to say why it isn't as good a route, say, as some of the others, except that if you are going to build a railroad you go in prepared to spend money to make a proper roadbed. What I see looming ahead of me is a question of why, if this is not good terrain for a winter road, it should be for a railroad; but the two things are different things.





THE CHAIRMAN: I hadn't that in mind at all.

MR. McMEEKAN: I thought I saw something there. You threw me off . . .

THE CHAIRMAN: I am not trying to argue a case.

MR. McMEEKAN: I am trying to back-track a little bit. But, I mean this, that for a cheap proposition it is not good. It would take money to put it in; and while it is feasible to put it in, still, the amount of money you would spend on repairing a makeshift road would make it uneconomic.

THE CHAIRMAN: Suppose it were a good road. Would it help the transportation situation?

MR. McMEEKAN: Decidedly; an all-weather road, yes.

THE CHAIRMAN: It would help so far as the summer is concerned when you take your freight across the lake?

MR. McMEEKAN: Yes.

MR. CAMPBELL: You have double trans-handling . . .

MR. McMEEKAN: Yes. If there were a good road connection to McMurray, yes; but you would have the fact that you could ship right from the central point to the big shipping points of Winnipeg or Edmonton. Yes, it would be all right; but under present conditions you have no good highway connecting with McMurray. I understand that there is no good





highway north of Lac la Biche. Is that not so?

There is a winter road, but under the conditions it would not be feasible.

THE CHAIRMAN: That is because . . . ?

MR. McMEEKAN: Because there is no truck connection.

THE CHAIRMAN: So that you would have to change to water from the road?

MR. McMEEKAN: I am an advocate of the ferry system so far as roads are concerned -- to use ferries and run trucks right on them and avoid loading and unloading problems.

THE CHAIRMAN: You mean run the trucks onto the railway cars?

MR. McMEEKAN: No; onto the barge ferry from the highway. We are still talking about a highway, which I don't, as I have said, consider feasible.

THE CHAIRMAN: You don't consider it feasible in so far as a highway is concerned now, but supposing a highway were built, would that be of some help?

MR. CAMPBELL: May I answer that?

THE CHAIRMAN: Yes, Mr. Campbell.

MR. CAMPBELL: I would like to say and I would like to point out at the present time that you have a very good road up to Hay River from Grimshaw, which is essential for base metal production.

THE CHAIRMAN: Yes.





MR. CAMPBELL: And that could very well happen in the Athabasca, because at the south of Athabasca, in the Pont du Lac area is a base metal area, and if you found a mine in the area you would have an outlet; but if a railroad were coming in the near vicinity of the western portion of Lake Athabasca you would have an outlet for ore, where, today, it would be impossible.

THE CHAIRMAN: That deals with the problem of getting the base metal freight out of the country?

MR. CAMPBELL: Yes.





THE CHAIRMAN: Now, what about taking the freight into Uranium City? Would the highway be of any assistance there?

MR. CAMPBELL: Well, economically speaking, I don't think so, unless it was coming from the other section or it was coming straight through. But to take and unload from freight car into Waterways and then ship on truck and then ship on barge, the charges are going to prohibit; they would be back to the cheapest method of transportation, which is water transportation.

THE CHAIRMAN: Of course, there is no water transportation in winter time.

MR. CAMPBELL: No.

THE CHAIRMAN: How would you get along during winter time?

MR. CAMPBELL: Well, I can remember back in the early days of Red Lake, which is 25 years ago, and they brought in slings of freight in the winter, which was three times the cost of bringing it in by cat trains.

THE CHAIRMAN: You think it would cost three times as much to go --

MR. CAMPBELL: Well, your cat train is more expensive.

THE CHAIRMAN: -- than it would be to take freight in by water during the summer time?

MR. CAMPBELL: I would think so. What is your contention on that, Mr. McMeekan?





MR. McMEEKAN: I am a little confused, Mr. Commissioner. We are here to represent a railroad, sir, and we don't think that as compared with the railroad the highway is worth anything at all, that a highway in there would be worth anything at all, in view of that gap between McMurray and Waterways. We do think, though, that a railway connection between the west end of Lake Athabasca would be of immeasurable assistance. The highway I don't think either of us can see.

MR. CAMPBELL: No, not without a straight through highway.

MR. McMEEKAN: With a straight through highway and assuming some system of running loaded trucks on to ferries or ferry barges could be devised, I would say for one that it would be of some use; but there is that gap, and we are all for railroad and we are not even thinking of a highway at the moment.

THE CHAIRMAN: Well, perhaps these questions are not fair, Mr. McMeekan, but I was interested in what the situation would be with regard to highway. The subject has been raised already, and if you know anything at all about it, I thought you wouldn't mind.

MR. McMEEKAN: No, not at all, sir. Our opinion is that -- and I think I speak for both of us -- we don't see the highway.





THE CHAIRMAN: You don't see the high-way giving you any help.

MR. McMEEKAN: Not any measurable help and certainly not the help that would be given by the railroad.

THE CHAIRMAN: You estimate, I take it, that the cost of taking freight in in the winter time over a winter road would be three times the cost of taking it in in the summer time by the water route?

MR. CAMPBELL: You would have your handling charges -- you are referring to straight through over a winter route, just a winter route?

THE CHAIRMAN: Yes.

MR. CAMPBELL: If my memory doesn't fail me, I think it was three times the amount to freight it in by winter route, that is by cat train in Red Lake, which is in the early days when it was real cheap, than it is by water. I would stick to that, and I would presume the charges are the same today -- a cat train route versus an all-water route.

MR. McMEEKAN: A fact to be considered in comparing water and winter transportation costs is that the Athabasca River between Waterways and Fort Smith cannot, by any means be considered a first class waterway. The actual cost of freight, which is very reasonable, does not take into consideration that the delays are sometimes very embarrassing and even killing delays and are caused





by the fact that it is only a second-rate waterway; and the level of water in the Athabasca system is affected by weather conditions away back in the Rocky Mountains, which are unpredictable. So the river itself cannot be considered a first class waterway, and the costs as quoted may be slightly misleading.

COMMISSIONER THOMPSON: May I just ask something? Are you talking about a railroad all the way into Uranium City?

MR. McMEEKAN: Not by any means.

COMMISSIONER THOMPSON: Where would you think to stop?

MR. McMEEKAN: Peace Point.

COMMISSIONER THOMPSON: You wouldn't be tied up just as much from Peace Point in the winter time. You say you can haul in January across the ice. Well, you wouldn't be able to haul any later from Peace Point than you would from McMurray necessarily.

MR. McMEEKAN: Well, you have more water there, you are not bothered by the shortage of water.

COMMISSIONER THOMPSON: It is not always low water in the fall.

MR. McMEEKAN: No.

COMMISSIONER THOMPSON: How would you propose to get your stuff from Peace Point to Uranium City?





MR. McMEEKAN: It would be yarded; every advantage would be taken of the high water, and then taken down the Athabasca.

COMMISSIONER THOMPSON: You mean you would haul with cats?

MR. McMEEKAN: From some point on Lake Athabasca.

COMMISSIONER THOMPSON: How would you get your freight from Peace Point in the winter? -- By sleighs?

MR. McMEEKAN: As much as possible; any that was necessary.

COMMISSIONER THOMPSON: It is only 48 miles from Waterways, so what would you gain?

MR. McMEEKAN: We would gain, as I said, in the better water.

COMMISSIONER THOMPSON: I am talking about when you can't use the water. When there is ice on the Athabasca there will be ice on the Peace. How do you get your freight to Uranium City? You would have to have cats and haul in from Peace.

MR. McMEEKAN: Yes, that is correct.

COMMISSIONER THOMPSON: Then you are only saving about 48 miles.

MR. McMEEKAN: There is no route.

COMMISSIONER THOMPSON: There would be no route from Peace Point.





MR. McMEEKAN: As I explained, sir, coming straight from Edmonton to Peace Point by railroad you are not subject to any climatic or water level stoppages, therefore you can pile up your freight at Peace Point, you can roll it in there and at the highest possible capacity, take it to some point on Lake Athabasca. You take it down by barge in preparation and stock pile it in preparation for the winter haul.

COMMISSIONER THOMPSON: I still can't see why you can't do the same thing; except for low water, you might have to take lighter loads. You could run it from McMurray down to there. There is not much difference in distance. There is not an awful lot of difference, is there, in the actual barge distances?

MR. McMEEKAN: That is correct; only there would not be the hold up on account of low water.

COMMISSIONER THOMPSON: But that doesn't affect you every year, and you can usually get over that by lighter barges.

MR. McMEEKAN: It is getting worse today.

If I might be allowed to make a few remarks -- we are here as representatives of Uranium City, but my view is that this railroad goes away beyond the actual economic effect on





Uranium City as it exists as a uranium mining community. My desire to see the road go up through McMurray -- I notice in many briefs the same point has occurred -- for the better good for the greater number of people. Now, I saw in the paper here where the Government of the Province of Alberta submitted that the roads are going to be by Grimshaw and doing more good for a greater number of people. That could be; there are a lot of votes in there. But north from McMurray you go through an area which has no proper transportation route. I do not consider the Athabasca River to be a good route, and nobody who uses it can consider it to be a first-rate route. If the road goes -- to take the position again, a road from Grimshaw -- if it goes in by Grimshaw it is parallelling an existing highway which has never been used to my knowledge to the limit of its capacity. The MacKenzie Highway was a wonderful conception. I was in the Northwest Territories when it was first spoken of in 1937. I think I am right in saying it was 10 years before it went in. That was to open up the fishing industry on Great Slave Lake, which it did. It was also to act as a route to provide for further colonisation development, as agricultural development, of the area north of Grimshaw, which, to my knowledge, it could be used greater for. If you put in a road there it is repeating the tragedy which has been





besetting Canadian transportation ever since Confederation -- a parallelling of routes. If the route followed by the Canadian Pacific Railroad, instead of being duplicated by parallel routes by other railroads, had been cut into sections by succeeding railroads and put into spurs leading northward, the whole Canadian development would have been different.

This road is primarily to develop Pine Point, but in the north there are so many other things besides Pine Point that it would help. If you assume, as we contend or submit as our contention, that there are any better conditions in Uranium City, then certainly it should go to the closest point to Uranium City, because Uranium City is established now in the same position relatively as Yellowknife; it is an established jumping off point, it can serve the whole area at least from the mouth of the Slave River to Fort Reliance. It is an established distribution point for that area, just as Yellowknife since its early days has been an established distribution point for the area between Great Slave Lake and Great Bear Lake.

As I say, gentlemen, you must accept our submission that it is going to help the Lake Athabasca area. In the vicinity of Lake Athabasca there is gold, silver, lead zinc, nickel, traces of copper, and, of course, uranium. Now, if you are associated with the Uranium mining





business as we are, that word in 1962 hangs over you like the sword of Damocles -- 1962. After 1962 I think that the population of Canada is probably going to rise up and shoot us, if we do something bad for the country instead of something which has produced many may thousands and employed thousands and thousands of people. It would be a tragedy if Uranium City were allowed to dwindle after 1962.

Gilbert McBean made a statement in Northern Miner that he does not know the military requirements after 1962, and he does not seem rather concerned thereby. He has an amazingly good, efficient, rich and large tonnage operation. The Eldorado Mining and Refining Company is a similar corporation. They alone possibly will exist after 1962. But in case anybody thinks that after 1962 there will be no uranium mining in Northern Saskatchewan, I can assure you that it is so well organised now that it is considered by the experts that the last bucket to be hauled would be hauled not in Blind River -- I speak with no local patriotism -- it will be hoisted not in Blind River but in Uranium City, even under present conditions.

I don't want to hold you up too long. Uranium City is established; it is a hub and distribution centre, and, in my opinion, everything should be done to encourage the well being of the





people there so that they will stay there. No one can tell what will happen to the uranium market, but certainly Uranium City must be kept alive; and certainly in my opinion, in all sincerity, I think it would be a tragedy, with some other tragedies of the same nature, if the road to the railroad to Pine Point were to parallel an existing highway, thereby vitiating the usefulness of both of them, rather than running up between two roads at least 500 miles apart. I refer to the Grimshaw Highway and the road into Flin Flon.





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COMMISSIONER GAINER: Your remarks are very much appreciated and our questions would not suggest any rejection of what you said. However, I suppose the thing we have to face in the end is whether or not a railroad within the terms of our reference starting somewhere in Alberta will in fact, do anything very much to support Uranium City in the future. In other words, it is not at all clear yet that the cost of bringing in supplies to mines, for instance, will be reduced by the extension of a railroad. That is not at all clear yet. Given the route that might have to be chosen the thing that is bothering us is the question of distance. We do not know what the freight rates will be on the extension of the rail line but we cannot assume they will be nothing. Surely it will cost more to ship to Peace Point than to Waterways at a given point. We know at best that railroad rates won't compete with water rates because that has been the history and there will still be water transportation involved or winter transportation involved even though the railroad were to go past the west end. This is the kind of thing that is bothering us. You still have your trans-shipment costs and winter costs and those are the things we are interested in.

MR. McMEEKAN: I think further on in





the brief Mr. Campbell makes reference to a time factor there in renewal of stocks to merchants during the winter time which would override any additional cost on freight.

COMMISSIONER GAINER: The question that comes to mind, though, is that you will still be subject to break up and freeze up. Let us say Peace Point, you won't have all year transportation even if the railroad does go in there.

MR. McMEEKAN: No, that is correct, but we consider it would be an improvement owing to that one factor to which I referred to before, the water between Peace Point and Lake Athabasca coming in at the southern end of the Athabasca delta. Unfortunately there is not a map.

THE CHAIRMAN: We have had the maps.

MR. CAMPBELL: Just prior to coming out here I referred that very question to Jack Huston -- some of you may know him, he had been with the Northern Transportation Company for quite a number of years and now is manager of the Gunnar Water Transportation division. Only recently he sent a barge into Swanson Lumber Company on the Peace in order to get some lumber and he said, "You know, if that road came through and even crossed the Peace and we had to ship from the Peace in here we could double the loads on our barges. We have barges of oil and stuff coming in and we could practically double





the load." He may have exaggerated a little bit but there is more water in that route and they could increase the load thereby cheapening the costs.

THE CHAIRMAN: That is the route from Peace Point to Uranium City?

MR. McMEEKAN: Yes, because the waterways even in the summer we have had our barges and docks tied up on sand bars for sometimes 15 to 24 hours.

COMMISSIONER THOMPSON: Did you never have any trouble on the west end of that lake with low water?

MR. CAMPBELL: We have not had, no.

COMMISSIONER THOMPSON: It seems to me you had a lot of trouble getting across. You mean that condition does not exist any more?

MR. CAMPBELL: I would not say that. There is shallow water in that area now.

COMMISSIONER THOMPSON: Winds come from the west, do you still have lots of water?

MR. CAMPBELL: No, you would have low water. It blows from one end to the other.

COMMISSIONER THOMPSON: And this happens when the Athabasca is hard to get through at the same time?

MR. CAMPBELL: Yes, but the Athabasca is the hardest to navigate.

COMMISSIONER THOMPSON: And in the fall the Peace does not go into the Athabasca at all,





it goes to the Slave. It only goes into the Athabasca when the Peace is in flood.

MR. CAMPBELL: Yes, that is in the early spring.

COMMISSIONER THOMPSON: One more question: You are not insinuating that if we did not put a railroad in that Uranium City would die away?

MR. McMEEKAN: Not at all.

COMMISSIONER THOMPSON: I gathered that is what you meant.

MR. McMEEKAN: No, it is a matter of continued support. The cost of living in Uranium City today is barbaric. I certainly was not inferring anything like that.

MR. CAMPBELL: Shall I continue?

COMMISSIONER THOMPSON: Yes.

MR. CAMPBELL: Future: The Canadian Government in conjunction with the Province of Saskatchewan has started to build an all-weather road from La Ronge, Saskatchewan, to Uranium City via Stoney Rapids, a distance of 530 miles. To date 43 miles have been completed and the opening date is set tentatively at 1967.

#### ECONOMIC PROBLEMS

All the heavy freight, mine machinery, lumber, building supplies, propane, gasoline and fuel oil come here by barge during the summer months and





must be stored for use till the next June. The Uranium City merchants do not have sufficient capital to pay for the goods and the storage charges and insurance so they must borrow funds from the Chartered Banks. All these extra costs are passed on to the consumers. The local mills and mines must also tie up large portions of their capital in supplies for the winter. Eldorado Mining and Refining Limited has an inventory valued at \$7,300, 000.00 at the end of the barge shipping season. This is in spite of the fact that it only costs them 6 cents a pound to bring in supplies on their own airline the year round. Perishables, eggs, meat, vegetables, must be flown in at all times as there is no proper reefer service available on barges. All the extra cost of living charges are offset by the higher wages paid in the area. The result is that the production costs of our finished product are greater than those of the Blind River and other producing areas. This fact will be a serious matter when uranium is sold on the open market.

I would like to say where this cheaper all year round transportation comes in, the winter transportation would not necessarily have to go from Peace Point, that could be your summer jump off point and the winter route would be somewhere along the line handy to debarkation along the lake. If the route was travelling north from McMurray to





Pine Point and a siding there would facilitate handling of material there.

COMMISSIONER THOMPSON: You mean someplace like Lake Claire about where the Birch River crosses?

MR. CAMPBELL: Yes.

COMMISSIONER THOMPSON: And that is further than Peace Point?

MR. CAMPBELL: It may be more accessible, perhaps flatter country in there.

COMMISSIONER THOMPSON: It would not freeze up any earlier through those marshes, would it?

MR. CAMPBELL: You do not think that is feasible?

COMMISSIONER THOMPSON: I was just wondering. It is exactly the same distance as from Peace Point anyway.

MR. CAMPBELL: At anyrate, along the line.

COMMISSIONER THOMPSON: And it may be a little bit worse.

THE CHAIRMAN: It looks to me as though it is almost as far at any point on that railroad as it is from McMurray.

MR. CAMPBELL: Well, you have already a figure of 48 miles shorter haul on the summer route with a greater volume on each barge which would make





that cheaper handling providing they do not charge too much on your extended rail route.

THE CHAIRMAN: It would appear it would cost somewhat less, considerably less to haul by water from Peace Point to Uranium City than it does now from McMurray to Uranium City.

MR. CAMPBELL: But again they would take into consideration the hauling out of ore from Pine Point. There will be a better balance if it goes through that way.

THE CHAIRMAN: But it is going to cost something to haul goods from McMurray by rail to Peace Point or to any other point along that river.

MR. CAMPBELL: True, providing it is not subsidized but it may be subsidized to some extent. Do you not think so?

THE CHAIRMAN: Suggestions have been made before us on this point that the situation is more likely to be the reverse. Their rate will be higher on the new route. Of course, we have not heard from anybody associated with the railway companies.

MR. CAMPBELL: There was a reference, the Chamber of Mines made reference to \$65,000,000 subsidy to the Grimshaw route and only a \$20,000,000 for the Waterways to Pine Point. Was that not brought out?

MR. BALDWIN: That is the Financial Post





suggestion.

THE CHAIRMAN: That dealt with highways rather than railways?

MR. BALDWIN: No, I think that is an article someone read into the record, a very speculative article.

THE CHAIRMAN: In the Financial Post?

MR. CAMPBELL: March 13th.

THE CHAIRMAN: That is only a speculation of a writer. We have not yet heard from the Commissioner of the Northwest Territories nor from the railways. They might tell us something about which I think we should pay more attention to than someone who is writing an article on the best information he could get.

MR. McMEEKAN: There are only two newspapers in the world that are worthy of being quoted and one is the Christian Science Monitor -- modesty forbids that I mention the other. Let us assume that, as appears to be troubling the Commission, the cost of freight with the railroad by McMurray is going to be higher owing to the fact that the rail transplanting the river way of carrying it, what we are concerned with in Uranium City is to be able to keep our stocks replenished. If we have some way we can do that even though it costs more the difference of a few cents in freight will more than over come the cost of putting in stocks or flying it





in in winter.

THE CHAIRMAN: Let me remind you of this: Our problem is to consider and to report upon the merits of alternative routes. There are undoubtedly merits concerning both routes and we ought to be able to give as accurate a report as we can, dealing with the merits of different routes. We are concerned with this aspect of the merits of the McMurray route and if it going to be an advantage to Uranium City that is something to be reported upon.

First of all, the question of cost. I take it that you have not gone into the costs and perhaps we cannot go into it and obtain an accurate cost of freight. However, it looks -- it appears from looking at the map as though it is going to cost a little more to take freight in via Peace Point than it will via the present route.

MR. McMEEKAN: May I answer that now?

THE CHAIRMAN: Yes, I want to know what you think of that.

MR. McMEEKAN: Of course, I would not argue with you or dispute you on that point --

THE CHAIRMAN: I may be wrong and if so, please point it out.

MR. McMEEKAN: There is also the point which is a very great point that although the railroad may go to Peace Point and then on. That way it still goes to McMurray and under the best conditions in





the river trading there is always a period when the Athabasca River is good for trading. The greatest possible use can be made of that and thereby we can get the full advantage of the water freight as well as having this other route which would alleviate the situation on the difficult waters. There is nothing to prevent us still shipping through waters and taking advantage of the cheaper rate if the other is too expensive when it is possible.

THE CHAIRMAN: Do you feel as I feel now, that it would appear it would be more expensive to ship freight from Waterways to Peace Point and then by water from Peace Point to McMurray and take it from McMurray to Uranium City by water?

MR. McMEEKAN: I would respectfully say that point is not settled.

THE CHAIRMAN: You think there is some doubt about that?

MR. McMEEKAN: Yes, that it would cost more.

THE CHAIRMAN: It may cost less.

MR. McMEEKAN: I am referring to the overall picture, I am not referring to cents per hundred pounds of freight. Of course, I am back on the Uranium City angle again.

THE CHAIRMAN: Then you have raised this point, I think you mentioned it and now Mr. Campbell has mentioned it in the brief. There is the problem now that you have of storing goods





in Uranium City from the time when water is open for use during the period when the water is frozen. That is one of the reasons you feel the railway would be of assistance?

MR. McMEEKAN: Yes. The purchase of goods all at one time, getting in a year's supply now and paying for it rather than getting in -- I am talking of arbitrary amounts of time -- it is the difference between buying all your supplies now or three months at a time.

THE CHAIRMAN: This presents difficulties?

MR. McMEEKAN: Yes, people have to borrow from the bank and pay interest and then when they run short they have to fly it in which really puts the price up.

THE CHAIRMAN: What I am wondering about apropos of the question Mr. Thompson asked a while ago, how will you get much relief by having the railroad built there because I think you suggested that the proposal you had in mind was that the freight go by rail to Peace Point and then when the water conditions are good it will be taken down the Peace, Fort Chipewyan or perhaps some other point there and stored there and then taken in the winter time over the ice on to Uranium City. You are proposing a storage problem again.

MR. McMEEKAN: Well, no.

MR. CAMPBELL: That would have to be





straight through by water. They would not take it by water to Fort Chipewyan and then over the ice, if they got it that far they could take it all the way through because the lake stays open.

THE CHAIRMAN: Well, what happens about freight in the winter time. You take it by rail to Peace Point during that period. When you now store your goods in Uranium City you hope to be able to bring them in by rail. How would you get them from Peace Point to Uranium City when the river and lake are both frozen?

MR. CAMPBELL: By two methods: A winter route similar to what they now have from Waterways that Jock points out that is not being used. Also by aircraft as they do sometimes right now from Fort McMurray. They fly in some parts from McMurray into the closer haul.





THE CHAIRMAN: Is this going to give very much relief, because you still have to take them over a winter route from Peace Point, or aircraft from Peace Point, just as you would have to do it from McMurray now?

MR. CAMPBELL: It is a shorter haul.

THE CHAIRMAN: It is a shorter haul?

MR. McMEEKAN: Roughly 48 miles.

MR. FFEHAN: That is, the water route; but the lake route is much more than that.

THE CHAIRMAN: What is the difference by air? Would you gentlemen like to look at this map?

---(Off record discussion).

MR. FOUKS: There was a point that was just touched on, and I got a little lost, or in some confusion. I don't mean to cross-examine, but I wonder if you would follow it up? We might have to check with the transcript to find out.

But there was at one point a statement made that if the water route was cheaper they would use that during some time of the year and use the lake at others. I wanted to know if that was from Uranium City.

MR. FEEHAN: I have that.

For the benefit of the reporters -- they tell me that they were unable to get the conference which has just taken place -- perhaps if we could get





something on the record referring to what was discussed it might be advisable.

THE CHAIRMAN: Yes; I am afraid we weren't very fair to the reporters there.

Suppose I try to summarize our discussion and then, if I have overlooked anything, I would look to you gentlemen to correct me.

We have looked at the map and it appears that the distance from Peace Point to Uranium City is 132 air miles, whereas the distance from McMurray to Uranium City is 216 air miles; and, consequently, Mr. Campbell and Mr. McMeekan feel that it is cheaper to carry freight in the winter time from Peace Point to Uranium City by a good deal than it is from McMurray to Uranium City.

Now, with regard to water transportation, the Peace River remains open for transportation at least three weeks longer than Lake Athabasca does. Consequently, Mr. McMeekan has said that he thinks that goods could be brought by rail to Peace Point and, following the period of three weeks, they would be brought by water to, say, Fort Chipewyan and stored there, to be taken later across the ice from Fort Chipewyan to Uranium City.

With regard to a winter truck route from Peace Point to Uranium City, that hasn't been considered -- at least, no route has been considered other than, perhaps, the water route along the Peace River





and across the lake. Is that right?

MR. McMEEKAN: Correct.

THE CHAIRMAN: Have I summarized it?

MR. McMEEKAN: Very well done, sir.

May I refer to a statement that has been made...

THE CHAIRMAN: Yes.

MR. FEEHAN: If I might ask a question. I believe that Mr. McMeekan said that in the event that the road would be in as far as Pine Point that would by no means mean that shipments from Waterways would be discontinued. Apparently the advantage between the two would be very, very small, except at one particular time of the year when the water in the Athabasca River was low.

I was wondering if he meant to intimate that a great deal of shipping would still continue on the Athabasca River even if the railway would go to Peace Point?

MR. McMEEKAN: I would like to elaborate slightly on that. I do mean that, but you must remember that in this I am referring only to our own particular problem -- to Uranium City. That would not necessarily make a great deal of difference in the shipping of freight on the railway to go beyond.

MR. FEEHAN: I suppose if the rates were cheaper by water from Waterways that would influence the decision as to how much would come from Waterways while the route was open?





MR. McMEEKAN: Yes.

THE CHAIRMAN: Are you satisfied, Mr. Fouks?

MR. FOUKS: Yes.

MR. CAMPBELL: That would, of course, be entirely up to the companies concerned in transportation, whether they thought it advisable to put two dock facilities in, one at Peace Point and the other down at Waterways.

MR. McMEEKAN: I am speaking with no authority for anybody, and that was merely in connection with the suggestion that costs would be added to the shipping of freight to Peace Point.

MR. FEEHAN: That is another question I meant to ask at a later time. Perhaps I could ask it now. I was going to ask Mr. McMeekan: In his opinion, would Northern Transportation go to the additional expense of putting dock facilities at Peace Point when they have them at Waterways and very little gain could be made by doing so?

MR. McMEEKAN: Will I answer that?

THE CHAIRMAN: Yes.

MR. McMEEKAN: Northern Transportation Company is a Crown Corporation which, while I understand it is expected to show as little loss as possible, still is not intended, I believe, to be a profit-making concern, and I think that possibly they might install dock facilities.

THE CHAIRMAN: Mr. Campbell, perhaps you can





get back to your brief.

MR. CAMPBELL: Thank you.

THE CHAIRMAN: I wonder if you can tell me where you were?

MR. CAMPBELL: I am at page 4. I hope I don't duplicate anything.

It is of the utmost importance that Uranium City and the other areas in the north have cheaper and all-year-round transportation. With freight being brought in by rail the merchants would order their supplies in small lots and have them delivered during the winter months as well as during the summer. They would be able to do away with their expensive storage problem and take advantage of special offers made by the distributors during the winter months.

This is just an example, and a very poor example, I must admit, but in the retail car market the new models that have been introduced in the fall do not reach Uranium City till the following June.

The present freight and express transportation in the north does not do a complete year-round job. The aircraft at present in use are outmoded and expensive to operate. The airlines will have to retire their present equipment before they can cut their rates. An example of new planes with cheaper operating costs is the GL-44 of Canadair and built in Montreal. Two American freight operators, Flying Tigers and Seabord and Western Airlines





Inc. have purchased a fleet of these turbine-powered planes that are equipped with a hinged tail for fast loading. The operating costs are estimated to be 11 cents a ton mile or half the cost of the planes the operators are now using. The problem for the Northern Canada operator would be the cost of \$4,600,000 a plane plus spare parts. It would mean that the equipment would have to be operated on a full-time basis to obtain the reduced cost per ton mile. This would be too big an undertaking for any of the present operators both as to initial cost and the volume of freight they would have to obtain in order to make it profitable.

The road situation will not be solved before 1967 -- and believe me, maybe not even then -- if they can finish the route from La Ronge to Uranium City as promised. The Province of Alberta constructed a winter road from McMurray to Fort Chipewyan in 1958. An independent operator used it once in early 1959 but found that it would require expensive equipment to do the haul.

Barges are the cheapest way to bring in freight but the season is seldom over 110 days. Often in the fall low water on the rivers makes it necessary to reduce the loads on the barges by half and all the freight does not get into Uranium City by freeze-up.

Therefore to reduce freight costs and have





all-year-round freight delivery we must have a railway into or near this section of the north. We fully realize that a railway from McMurray to Uranium City would not be economically sound at the present time as freight in and out would not justify the capital expenditure. We are vitally concerned that the route of the proposed Great Slave Lake Railway start at McMurray and go north via Fort Chipewyan and Fort Smith to the Pine Point area. For Chipewyan would be the shipping point for supplies to Uranium City both during the summer and the winter. In summer during the periods of low water on the Athabasca River, and before freeze-up when Lake Athabasca is open and the river is closed by ice full scale operations could continue over the lake. The distance is about one hundred miles. During the winter the freight would be taken by truck over the ice. For the short in-between seasons freight could be taken by plane or stockpiled.

The McMurray route would open up very rich mineral areas, the tar sands deposits and also give access to large stands of timber. Up to the present time there has been no possibility of getting any of these products to market as there are no railways, no roads, and no large airports in the area. The route north of Grimshaw has had a road for some years and the potential resources in that area are not as great as those north of McMurray. We feel that to





parallel a present road with a railroad would be an expensive duplication of services. A railroad north of McMurray would eliminate the need of a future main road and the area could be serviced by access road to the railway.

I believe, and I believe the railroads believe, so far as their estimation of putting a railroad from McMurray, that they wouldn't have a highway to be in opposition to them as they would with the Grimshaw-Hay River route.

The technical details concerning the geographical location of the Great Slave Lake Railway has been taken up in the brief submitted by the Chamber of Commerce of McMurray.

The Uranium City Chamber of Commerce supports the selection of the route of the Great Slave Lake Railway from McMurray north for the following reasons:

- a. That the route is the natural one from the supply centre of Edmonton to the Great Slave Lake area.
- b. That lands rich in minerals, forest products and tar sands will be opened up and economically developed.
- c. That the cost of goods will be reduced to the Uranium City consumer as rail will mean all-year-round delivery.
- d. That the production costs of the Uranium





mines and mills would be reduced so that their product would be more competitive in the world markets.

- e. That the large summer and winter fishing industry on Lake Athabasca could ship their products out in refrigerated freight cars from Fort Chipewyan or that area and so save in handling costs over present methods of trucking or flying the fish out to market.

I would like to add to that that we agree whole-heartedly with the Alberta Northwest Chamber of Mines in the presentation of their brief, and we will go along with them in their position and in support that, in the first place, the railroad has to come by the railroads themselves, and that it would go north from McMurray to open up the Pine Point fabulous mine and area.

There is only this, that I can see the project passed on by the voting public, and I might add this, that when it gets to Ottawa, if we have a few more statesmen than vote-getting politicians, then the road, as I see it, will go in as the railroad sees it and as the Chamber of Mines sees it, for this area north from McMurray or Waterways to the Pine Point area.

Thank you.

THE CHAIRMAN: Have you any questions, Mr.

Gainer?





COMMISSIONER GAINER: I don't think so.

THE CHAIRMAN: Mr. Feehan?

MR. FEEHAN: I would like to ask the old stand by that we have asked each and every person presenting a brief who has mentioned base metals and various other metals. I would like to ask this question, whether Mr. Campbell has any specific knowledge of any size of ore-bodies north of Lake Athabasca, or in the area between Athabasca and Great Slave Lake?

MR. CAMPBELL: Well, I am particularly interested in the east end of Lake Athabasca. As I said before, the route on Lake Athabasca to a western shipping point would be the proper way to bring it down to Fort Saskatchewan or this area where it could be produced.

There is nickel -- to what extent nobody seems to know. I have been in the property myself, and there is nickel. Some of the showings are four feet wide and some are twenty feet wide. The grade is low to mine it. There hasn't been too much activity in it because of its inaccessibility.

But I have been in the Father Lake area north of Stony Rapids, and, believe me, it looks like good country; and if there was a route going north it would bring it closer to them if it passed nearby Lake Athabasca.

Now, the other parts of Northern Alberta I would leave to the Chamber of Mines, because I am not familiar too much with the Alberta end of it.





MR. McMEEKAN: Also in the area -- take, for example, the Nicholson Mine; they were shipping uranium ore, which contains gold and platinum. There are also, at the east end of the lake in the vicinity of Stony Rapids, copper showings. At McGinnis Lake, just over in the Territories, there is uranium, in appreciable quantities; and during the time of the operation of the Box Mine there were at least five fair-sized gold mining operations there, none of which was proven to be economic under the conditions that existed.

COMMISSIONER THOMPSON: Might I ask Mr. Campbell one question? You say the east end of the lake has, as you consider, a lot of possibilities. Wouldn't it be a lot handier to put a railroad from Lynn Lake rather than along the north shore?

MR. CAMPBELL: We would probably be in the same position as Pine Point for the last thirty years, still trying to get a railroad or means of shipping. We would still have to get a railroad into the property, and some of these showings are still on the shores of Lake Athabasca in the Pont du Lac area.

COMMISSIONER THOMPSON: Have they been proven?

MR. CAMPBELL: No, I don't think so. I don't think enough work has been done on them. If you have a railroad in the area there is no use trying to ship out concentrate by air.





COMMISSIONER THOMPSON: Canadian Nickel worked in there for years, did they not?

MR. CAMPBELL: Yes, they did.

MR. McMEEKAN: Yes, and the strange part of it is that they staked claims and did not record them, and there is no record of what they found or didn't find, which makes it not only impossible to say what they discovered but also makes it appear that they must have had encouragement to go in there for several years.

COMMISSIONER THOMPSON: They also drilled at Simpson Lake, and we know as soon as they get enough they make a mine of it.

MR. McMEEKAN: Yes, but they need an awful lot to make one of their mines.

MR. BALDWIN: Mr. Chairman, I suppose I could be permitted to ask you to make an observation with regard to the last statement Mr. Campbell made in his brief. Probably you might ask him if he doesn't agree with the Prime Minister who said that a statesman is a dead politician and what we need is more statesmen.

MR. CAMPBELL: I believe a statesman is a person who is taking into consideration the country above the votes and he speaks straight from the shoulder without beating around the bush.

MR. FEEHAN: I wonder if I might ask Mr. Campbell a further question, sir.

If you had your choice of a railway to the





populated portions of Canada through to Uranium City or vicinity, which would be the best route or which route would you choose?

MR. CAMPBELL: Well, you are just saying through the populated areas. Are you not forgetting a lot of things, such as the prime reason of putting this railroad to the north and which is chiefly to bring down ore or concentrates from Pine Point, which is, as I understand it, an orebody which is extremely large, 25 miles long, and has a great potential for Canada, and the manufacturer or, let's say, Consolidated Mining & Smelting, have taken this into consideration, and I believe, when it boils right down to it, they are going to submit their brief, are they not -- or are they? Are they waiting to the end?

MR. FOUKS: They are waiting to the end.

MR. CAMPBELL: But I believe their brief is naturally going to support the Waterways-Pine Point route, for the simple reason it is the cheapest and straightest route from one point to the other. They are probably going to get this concentrate down in Trail; and, as far as I am concerned, representing Uranium City and district, I think that if that route comes as close as we can get it to Uranium City it is going to benefit us even though we are going to tie another railroad onto it at a later date.

THE CHAIRMAN: Any further questions?





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Thank you very much, gentlemen.

Mr. McMeekan had two memos this morning about uranium which I think he is going to file as exhibits. If you have anything to say about them, would you mind coming back at two o'clock?

MR. CAMPBELL: I have an appointment at two-thirty, but Mr. McMeekan can be here.

MR. McMEEKAN: Assuming that we have nothing further to say, Mr. Chairman, I would like to thank the Commission for putting up with our rambling statements and giving us such a courteous hearing.

THE CHAIRMAN: Thank you very much. It has been a pleasure for us to have you here.





SUBMISSION OF  
W. L. BRINTNELL

THE CHAIRMAN: Mr. Brintnell, I think you very kindly agreed to come and give us your brief this morning, a little out of order?

MR. BRINTNELL: Yes.

THE CHAIRMAN: We would like very much to hear from you now. Mr. Brintnell, I think it is fair to say that you are one of the bush pilots of the north, I think one of the first to fly in the Territories?

MR. BRINTNELL: Yes, that is right. May I go ahead now?

THE CHAIRMAN: Yes, and feel free to elaborate on your brief if you would like to.

MR. BRINTNELL: Yes.

Mr. Chairman and members of the Commission, in submitting this brief I would like to outline my transportation experience in Northern Canada.

From 1924 to 1928 I conducted flying operations in Labrador, Quebec, Ontario, Manitoba and British Columbia. During this period the railway was being extended north of The Pas, Manitoba, to the Hudson's Bay Mining & Smelting Co. property, as well as to Sherritt Gordon Mines Ltd. We did all the flying for these companies, and I was naturally interested in the success of railways as they are necessary





in our North to carry heavy tonnage twelve months of the year. The only industry which produces sufficient tonnage both ways is the mining industry. Although the extension of this railway to Fort Churchill was built on flimsy economic concepts, it prospered due to the development of more mining properties with permanent towns, providing employment for more people. These large mines are also heavy taxpayers to the federal and provincial governments.

The above pattern followed closely that of the extension of the Temiskaming and Northern Ontario Railway, years before, in Northern Ontario. Prospectors fanned out both sides of the right-of-way, and found many new mines which provided freight for the railway and developed new towns and cities.

From 1928 to 1950 I operated air services from Edmonton to Yellowknife; Peace River to Hay River and Yellowknife, and Prince Albert to Uranium City and Yellowknife. I have flown these routes many times myself and consequently, I know the terrain in general and the potentialities of each route.

With reference to the proposed railway to Great Slave Lake from Edmonton, and the two routes under consideration, I understand from the press that the Canadian National Railway and the Canadian Pacific Railway consider the cost of each route approximately the same. Therefore, the economic





factors, as well as the prospects of developing new natural resources, must be considered.

Geographic and Geologic Considerations

1. The terrain from Grimshaw to Hay River is geologically only suitable for agriculture, or the finding of oil. If oil is found it will be moved by pipe line. Everyone in Western Canada knows that agriculture alone does not produce sufficient freight to make a railroad economically feasible. This area is now adequately served by an all-weather road with daily truck service. The announced plan of paving this road will take care of future needs for some time.

2. The Waterways-Ft. Smith-Pine Point route has the salient advantage of being alongside the Pre-cambrian Shield where mining already exists, with great potential for new discoveries of more minerals. A railroad with the magnet of year-round transportation has always been a stimulus to more prospecting.

3. Uranium City can be more expeditiously served by boat from a depot at the crossing of the Peace River, than by the Athabasca River. A spur to Uranium City would eliminate all the uncertainty of water travel and provide the railroad with 115,000 tons of freight per year. When constant transportation is available, it would create more traffic and save the mines, and all other businesses the cost of maintaining a year's inventory in advance.





4. There are over 350 mining claims staked by the Hirshorn mining companies 60 miles N.E. of Ft. Smith. The grade of ore as announced in the Northern Miner is 2 per cent copper, 2 per cent nickel and  $\frac{1}{2}$  percent cobalt. The orebody extends for over ten miles. This group has not released the publicity this discovery warrants because they have not yet finished acquiring land. The development of this property, as well as Pine Point Mines Ltd., would require a large portion of the electrical energy of the "Rapids of the Drowned" at Fort Smith. These mineral deposits, as well as the power project, would make it essential that the railway be extended from Waterways.

5. The lumber operations on the Peace River, where one of the finest stands of white pine exists, are already substantial, and would provide a railway with appreciable two-way freight. The Gypsum deposits at Peace Point and the fishing industry on Lake Athabasca would benefit by the railway, and also provide freight revenue.

6. The Edmonton-Waterways-Pine Point distance is 97 miles less than the Edmonton-Grimshaw-Pine Point route; therefore less costly to operate, and closer to eastern markets. The grade is better on the Waterways route than the Grimshaw one. There is already more two-way traffic available on the Waterways route. From the standpoint of the future, the N.E. part of Alberta, the N.W. part of





Saskatchewan and the N.W.T. east of the Slave and Athabasca rivers, are geologically favourable for the finding of minerals. This area is immense and virtually unprospected. The uranium and copper-nickel finds give one an inkling of the abundance of Nature's gifts in this vast land. Strategically, a railway adjacent to the Slave and Athabasca rivers would have the added advantage of a supplementary water system in the event of trouble.

#### Conclusion

I wish to state that I am making this submission of my own volition. Due to my flying experience, I look on this area in question as a whole, with no feeling of sectionalism. The natural resources of many kinds and particularly the latent mining possibilities, balance the scales overwhelmingly in favour of one route. Based on my experience in Eastern Canada, as well as my knowledge of this country, I am convinced that the economy of the Northwest Territories and Alberta can best be served by a railway from Waterways-Fort Smith-Pine Point with extensions to other points when needed.

COMMISSIONER GAINER: I wonder, perhaps, Mr. Brintnell, if you would care to elaborate on what you know of the possibilities of a reservoir and dam-site on the Slave River here. Is it at all feasible, a reservoir prospect feasible from the Slave River?

MR. BRINTNELL: Yes, at Fort Smith.





Consolidated Mining & Smelting Company have made very extensive engineering surveys as well as a power commission, and it looks like there is approximately a potential of about half a million horsepower in the rapids.

COMMISSIONER THOMPSON: Would you just elaborate a little more on this Hirshorn mining company? Where can we get this information about Hirshorn's statement of 2 per cent copper, 2 per cent nickel and  $\frac{1}{2}$  per cent cobalt and the amount of ore? Where can we get that information?

MR. BRINTNELL: Well, direct from the companies. The Hirshorn interests are the people who developed the whole Blind River uranium area, which is one of the largest in Canada, and they have several companies, one of which is Snowdrift, and they have several other names of companies in which these claims are.

COMMISSIONER THOMPSON: This, I take it, is the Snowdrift Mining Corporation?

MR. BRINTNELL: Well the Hirshorn interests, and they are connected with Rio Tinto, which is a very large English company with a great deal of interests in Canada now, and they control these smaller companies in which these claims are recorded. This information has been published in The Northern Miner under the signature of their consulting engineer.





COMMISSIONER THOMPSON: Was that Mr. Moffat?

MR. BRINTNELL: Yes.

THE CHAIRMAN: Do you know anything more than what you saw in the Northern Miner, Mr. Brintnell, that you are at liberty to tell us?

MR. BRINTNELL: Not much. I have talked to people who have been on the property, and, although they staked in the winter time, most of the work had been done through diamond drilling. But the prospectors I talked to say there is undoubtedly a big break running right through the country for a great distance and there is a lot of mineralization at the side of this break, but unfortunately they couldn't get any samples in the break itself.

THE CHAIRMAN: You have reported a grade of ore which sounds to me to be rather interesting. Do you know to what extent research work was done or what work was done to try to establish that grade of ore?

MR. BRINTNELL: No. The report in The Miner just gave the average grade of ore was as I quoted, but they didn't give any length or width of this ore. The fact that they have staked so many claims there and being a large outfit, I personally think there must be something to it. They wouldn't be doing that just to spend the money, because it is a sizeable commitment.

I have a couple of exhibits I would like to





present, Mr. Chairman. One is a photograph from The Northern Miner as of August 6th of an International Nickel Company property at Thompson Lake, which is a multi-million dollar property, and this, of course, means that there is going to be a city developed there and a lot of employment for more people.

The other one is a folder of the Ontario Northern Railway as it is now called, and when you look at this map, it was put through from North Bay, Ontario, to Cochrane originally.

THE CHAIRMAN: This is what you referred to in your brief?

MR. BRINTNELL: Yes. It was called the Temiskaming & Northern Railway then; it is now called the Ontario Northern Railway. At that time it was unknown country; it was colloquially termed bush pasture, and to see all the number of well-known towns -- Cobalt, Haileybury, New Liskeard, Elk Lake, Kirkland Lake, Noranda, Timmins, and these great mines -- they have paid a tremendous amount of dividends to shareholders.





That will give you some idea of what a railway can do if it does go through an area that is potentially available for mining. Prospectors, as they did in this, fanned out on both sides and found most of these mines which stimulated a tremendous amount of mining in northern Ontario. This has made Toronto not only the mining centre of Canada but it is now an international centre.

I would also like to say that as far as the Grimshaw route is concerned that I feel it will not be too long before a railway will be projected from Dawson Creek more or less parallelling the Alaska highway right through to Whitehorse and Fairbanks. There is a great deal of pressure from the standpoint of Alaska, the new state, and also there is pressure from the military people in Washington. In the event of war it would practically be essential to have rail transportation to that state because it is a very important military base due to its proximity to Russia.

I do know that people in Montana, Wyoming, Colorado, the whole route are all working, their senators are working very hard on this program because they are convinced that this route would be the best one you could find. I also believe this to be true.

I happen to know British Columbia better than most people who live there because I





have flown over every bit of it and this route through here -- of course, there was a great deal of controversy when that route was put through because other factors wanted to go along the coast. The valleys there are very steep and if you did have any trouble from a military viewpoint I think it would be knocked out permanently. The present Alaska highway goes through wide valleys that means it could be knocked out temporarily but not permanently. It could be repaired and fixed up. All of these factors turned up. It will not be too long before we will have a railway extended on from Dawson Creek to Alaska.

THE CHAIRMAN: From Dawson Creek to Whitehorse?

MR. BRINTNELL: And Fairbanks, Alaska. That is the objective, to take it to Alaska.

THE CHAIRMAN: And you think the main reason for that route is because it is in a broad valley?

MR. BRINTNELL: The main reason is because of necessity for rail contact with Alaska, the new state.

THE CHAIRMAN: I am sorry, the reason for the route which you have suggested rather than a route further west is because of the width of the valley?

MR. BRINTNELL: Yes, it is the best route. Also, from a military standpoint it is essential to





to have a railway through to Alaska. That is from the standpoint of the United States and, indirectly, ourselves. Therefore that route parallelling more or less the highway seems to be the best route there is, because it is the widest one there is through the rocks.

THE CHAIRMAN: That is for economy and military reasons?

MR. BRINTNELL: Yes.

THE CHAIRMAN: Now, do I take it that you suggest that because it is a likely route for a railway to take, that there would be no reason for building another railway from Grimshaw to Hay River because they would be so close together?

MR. BRINTNELL: I do not think there is a necessity for that now because the truck transportation is taking care of it rather adequately. However, I would not say for the future. We must have a lot of railways through to the Arctic right across Canada and it will come eventually. In fact, an extension of this road we are talking about now should go straight on to Copper Mine which is a sermon I have been preaching for 20 years at Ottawa and nobody could see it. It is only now because someone else might like to have our north that we are becoming, from the viewpoint of Ottawa, interested in not only providing us with some transportation but developing some





facilities and having some appreciation of the tremendous natural resources there are.

THE CHAIRMAN: You think an extension of this road should eventually go on up to Copper-mine?

MR. BRINTNELL: I believe so.

THE CHAIRMAN: How would you take it to Copper Mine? Across the east side of Great Slave Lake?

MR. BRINTNELL: It will depend on the developments. These developments, I suppose the railways are concerned because it is subsidized by the Government. Now, I do not mean an annual subsidy but the Government is paying the cost of it and the capital must go back. You have to get it back through revenue and you get it back faster from mining developments than any other way. For instance, Yellowknife is a very unique community because it is a happy blending of the efforts of Government and private enterprise; Government have put in communications, roads and power. In a community like this I do not think a Government should be in the power business but there it is necessary. They had to amortize it over 50 or 75 years which private enterprise could not do. One mine alone at Yellowknife -- Mr. Thompson may know this -- they are paying now \$490,000 a year in taxes to the Federal Government. That is





only one. For the other mines the figures are easily obtainable as far as Jack Yellowknife is concerned and Consolidated Mining and Smelting Company. It just gives you an idea of how fast these capital expenditures can be paid back through mining. Incidentally, I have no connection with mining at all at the present time. Previously I did have some interests but I spent a lot more money on oil developments in the Northwest Territories than I ever did in mining. At the present time I am spending all my time in developing oil.

THE CHAIRMAN: Any other questions?

MR. FEEHAN: Mr. Brintnell, it was suggested when we were at Yellowknife that the railway was a 20th century phenomenon and soon would die out in favour of the aircraft. What is your opinion along that line as far as developing the north is concerned?

MR. BRINTNELL: I am sorry but I did not quite get your question.

MR. FEEHAN: My question was whether the north could be efficiently developed through the use of the aircraft in substitution for a railway.

MR. BRINTNELL: Yes, I understand that question has come up, and naturally, I have been in the aviation business most of my life. I could not quote you all the prices you want about the cost per ton mile with the large planes built today, but





I can say that it means you have to have first class airports. Our airport here is going to cost \$20,000,000 to \$30,000,000 because these planes are heavy. Furthermore, you have to have sufficient volume of freight that you can get high utilisation out of these planes because otherwise you won't pay for the operation of the aeroplane. Operating an aeroplane is the same as manufacturing thread or anything else, you have to churn it out very fast, churn out the flying hours per day to make any money. That is very well illustrated in the map of the Ontario Northern Railway with all these little mining towns. How can you carry large amounts of freight into these little places without a railway? I have done a lot of this, I have carried a lot of freight into inaccessible places. When we are talking about any comparison to the cost of the railway, it would be much more costly to fly that aeroplane even if you use the natural facilities of the country landing on water or ice. Furthermore, the operation of an aeroplane depends on its speed, that is, you are going to take X number of tons from A to B as rapidly as possible. This means, of course, the faster you get it there the cheaper you get it there, but if you are landing all the time the price militates against you.

THE CHAIRMAN: You have always advocated a railway and still do for developing the north





country?

MR. BRINTNELL: It is essential because in many ways you have to have them. For the purposes we are talking about here and now, on the map it shows the Ontario Northern Railway and this was country that was unknown. People said it was not good for anything but prospectors went out and found all these mines and developed the great mining industry. That was done in the early part of the 19th century. I believe the aeroplane cannot serve the same purpose that a railway will in developing a new country.

MR. FEEHAN: You say in your brief on page 4 that the grade is better on the Waterways route than the Grimshaw route. Would you explain that a little further?

THE CHAIRMAN: I am sorry, but Mr. Thompson wants to get away and I wonder if we could go on with this after lunch? Could you come back after lunch, Mr. Brintnell?

MR. BRINTNELL: Oh, yes.

THE CHAIRMAN: Perhaps we should start at quarter to two. We will adjourn now until quarter to two this afternoon.





---On resuming at 1.50 p.m.

THE CHAIRMAN: Mr. McMeekan, you were kind enough to come back this afternoon. Do you mind if we complete the questioning of Mr. Brintnell?

MR. McMEEKAN: No, not at all.

THE CHAIRMAN: Mr. Feehan, you have some more questions, I think?

MR. FEEHAN: I have.

Mr. Brintnell, in your brief, at the top of page 4, you refer to the grades of the various proposed routes, and, in particular, you say this: "The grade is better on the Waterways route than the Grimshaw one." Could you tell me whether it is possible to put a high-grade or high-level crossing at Peace Point on the Peace River?

MR. BRINTNELL: A which?

MR. FEEHAN: A high-level crossing?

MR. BRINTNELL: Well, it possibly could be done, but at tremendous expense. You mean to overcome that very bad grade?

MR. FEEHAN: Yes.

MR. BRINTNELL: At the Peace River valley?

MR. FEEHAN: Yes; that is what I had in mind.

MR. BRINTNELL: There is a very bad grade there -- seven miles of it -- and it would be, I would imagine, a very expensive thing to overcome that.





MR. FEEHAN: Would it be fair to say that the grade at Peace River would be almost identical at Peace Point as it is at the Town of Peace River?

MR. BRINTNELL: No, I would say not.

MR. FEEHAN: Which would be the worst grade?

MR. BRINTNELL: Oh, at Peace River itself, because you have the Peace River valley there, which is seven miles at a grade of 2.4 per cent, which is a pretty serious problem.

At Peace Point the whole country is flat. In fact, from Waterways north the terrain is flat all the way right over to Pine Point.

MR. FEEHAN: How deep would the bank be at Peace Point?

MR. BRINTNELL: At Peace Point -- oh, they wouldn't be any more than most places -- 10 feet or so.

MR. FEEHAN: So you could put a high-level crossing without going down to river level?

MR. BRINTNELL: I am assuming we are talking about Peace River -- down at Peace River?

MR. FEEHAN: I was trying to distinguish the difference in grade in crossing the river at Peace Point rather than at Peace River; and you tell me that there is a very bad grade at the Town of Peace River?

MR. BRINTNELL: Yes.

MR. FEEHAN: But no grade to speak of at





Peace Point?

MR. BRINTNELL: Yes, that is right.

MR. FEEHAN: That is all I want to know;  
thank you.

MR. BRINTNELL: In other words, the Waterways route has the better grade, because you are practically following the banks of the river. There is no high terrain at all. But there is a bad one at Peace River on the Grimshaw route; and on the other route there are several other rivers where you would have the same thing. You would have the double grade, going down and up, which would mean you would have a hard pull both ways, both going north and coming back; and you don't have that on the McMurray route.

MR. FEEHAN: What would the effect be of crossing the Athabasca river in the vicinity of McMurray? Would there be a serious grade problem there?

MR. BRINTNELL: No.

MR. FEEHAN: Would there be any grade problem?

MR. BRINTNELL: Well, it is just going from one bank of the river to the other. No, I don't see that it would be a serious problem at all.

MR. FEEHAN: It was suggested this morning by Mr. Campbell that the ideal situation, so far as Uranium City is concerned, is that the railway would be in the vicinity of Fort Chipewyan. Would that, in your opinion, be feasible, having regard to the





terrain between Lake Clair and Lake Athabasca?

MR. BRINTNELL: Well, I am not contradicting Mr. Campbell, but I do think that Peace Point, or wherever it is the route is selected -- that that would serve as the depot. As I said in my brief, this would serve for independent water transportation for Uranium City very adequately, and I don't personally see the necessity of going into Chipewyan. There is absolutely nothing there -- no reason.

MR. FEEHAN: Perhaps I could explain Mr. Campbell's statement. What he said was that the ideal situation would be to go to Chipewyan on the east route and then all the air freight or the barge freight between, say, Chipewyan and Peace Point could be done that way and the service would be much better into Uranium City. My question is whether it would be, basically, feasible to put a railway through in between these two lakes?

MR. BRINTNELL: In between which lakes?

MR. FEEHAN: Lake Clair and Lake Athabasca. Is the terrain good enough that a railway could be put through there?

MR. BRINTNELL: No; I think it would have to go around Lake Clair and across the Peace west of Chipewyan.

MR. FEEHAN: In your opinion it would be impossible to put the railway in between Lake Clair and Lake Athabasca?





MR. BRINTNELL: I wouldn't say impossible, but I imagine it would be quite costly.

I would think that would be the logical route, and I think it is the surveyed route, going from the west bank of the Athabasca and then just deviating around Lake Clair and across the Peace.

MR. FEEHAN: Have you ever had occasion to do any travelling on land in this particular area?

MR. BRINTNELL: Oh, yes, I have.

MR. FEEHAN: Most of your observations would be from the air?

MR. BRINTNELL: Yes -- sometimes almost the same as if I had been walking.

MR. FEEHAN: You were able to observe the type of terrain?

MR. BRINTNELL: Yes -- sometimes in bad weather.

MR. FEEHAN: I am sure the Commission would be interested, Mr. Brintnell, about the terrain along the proposed east route. Would you give us your information?

MR. BRINTNELL: I think I already have. I have said it is a very level grade by Waterways, McMurray, across the east bank and west bank of the river; it doesn't change appreciably at all; and then, if you deviate around Lake Clair you are on firmer ground across the Peace, and it is a fact that it is a level route from there over to Pine





Point.

MR. FEEHAN: There have been numerous suggestions that this is wasteland, barren land, peat land, bog land and the rest of it. In your opinion could suitable terrain be located along the east route?

MR. BRINTNELL: On the east?

MR. FEEHAN: Along the Waterways-Peace Point route?

MR. BRINTNELL: Oh, yes; I am sure of it. You know, terrain is always interesting. It is interesting to see what nature has done; and I am always looking at it. I have looked at it a great deal; and I think a very good route could be worked out there.

Apropos of that, I do happen to have some experience when I was flying over the Slave and into the Chet mine -- I was flying back and forth a great deal -- and at low altitudes because there was no reason to go to high altitudes; and when the railway was proposed I just marked on my map what I thought would be the good grades, and the engineer came and asked what I thought and I said I thought it was a pretty good grade, and I told him what I had done. I looked at it. A few days after that I saw him going in with a team and a sleigh. It just so happened that I had looked a little bit at it.

MR. FEEHAN: We have also had information that the majority of the ground area between Peace Point and Hay River is marshland and bog land. Have





you had occasion to do extensive flying in that area?

MR. BRINTNELL: Yes, I have; and on the ground, too.

MR. FEEHAN: And what would you say about the feasibility of a railway across that territory?

MR. BRINTNELL: Actually, there is a good route just a little bit west of the river, at the confluence of the Peace and the Slave; and just a little bit west of that -- this is a bit of low ground here (indicating)

MR. FEEHAN: That is Clair Lake?

MR. BRINTNELL: No; Clair Lake is down in here (indicating). But just west slightly it is hard ground. I have been in there on hunting expeditions and expeditions . . .

THE CHAIRMAN: Where is this place you are pointing to?

MR. FEEHAN: You were pointing to an area north of the confluence of the Slave and Peace rivers as being lowland, but to the west of that is land with a pretty solid foundation?

MR. BRINTNELL: Yes.

MR. FEEHAN: And continuing northwest of the Slave River is solid ground?

MR. BRINTNELL: Yes; like, to Fort Smith, and then across here (indicating). This is all good land right across here. In fact, there are buffalo trails, and they always follow the hardest ground. You don't see it so much in the prairies





now. But there is a stretch right across there which is good hard ground.

MR. FEEHAN: You are indicating almost the northwesterly route from Fort Smith?

MR. BRINTNELL: This is not my map, but I assume if the railway goes from Waterways it will go to the vicinity of Fort Smith for power, which is most important.

MR. FEEHAN: And you have indicated that the northwesterly route to Pine Point would also provide good terrain?

MR. BRINTNELL: Yes.

MR. FEEHAN: These are all the questions I have.

COMMISSIONER THOMPSON: I would like to ask one more question. Did I understand you aright that you would follow the Athabasca, close to the Athabasca, with a railroad -- that you would follow down close to the Athabasca -- or would you get back inland?

MR. BRINTNELL: Well, both.

COMMISSIONER THOMPSON: Surely not both. You wouldn't build a railroad both places. Which one would you say -- down to the river, or back inland?

MR. BRINTNELL: Well, from McMurray you would just follow fairly close along the river.

COMMISSIONER THOMPSON: What about the 23 rivers you have to cross on the way from McMurray? You have at least 23 major rivers to cross. Would you





have bridges on each of these, plus all the minor ravines? You wouldn't pull very close into the bank, would you?

MR. BRINTNELL: It wouldn't alter the situation any if you went a little further west. I mean, this is an engineering problem for the railway.

COMMISSIONER THOMPSON: But, I mean, I thought you said the railroad would follow down the river, in which case . . .

MR. BRINTNELL: I am speaking in general. I maintain that the grade is an easy grade along the bank of the river.

COMMISSIONER THOMPSON: But you have got to have bridges?

MR. BRINTNELL: And further west it is flat.

COMMISSIONER THOMPSON: But if you went back inland you rise a thousand feet in thirty miles. Is that not a serious grade, going from McMurray back up onto the plateau on the top? It rises about a thousand feet.

MR. BRINTNELL: If you go far enough west, yes; and you also get into the Clear Hills there, which are quite high.

MR. THOMPSON: And if you go the other way you run into this mess of rivers?

MR. BRINTNELL: You can skip around the edge of the Clear Hills and get around that way.

COMMISSIONER THOMPSON: The Clear Hills --





you mean the Birch Mountain?

MR. BRINTNELL: Yes.

COMMISSIONER THOMPSON: But when you do that you have risen a thousand feet. You are a thousand feet above the river bed?

MR. BRINTNELL: I don't say you are going over the top of Birch Hill.

COMMISSIONER THOMPSON: But suppose you go back, you have still gained a thousand feet from the river, haven't you?

MR. BRINTNELL: Well, I would say following along the edge of the river, which I have been along many times, it would be a very, very good grade for a railway.

COMMISSIONER THOMPSON: We know it would be a good grade for a railway, but you are crossing 23 main rivers that have pretty sizeable ravines?

MR. BRINTNELL: Well, there are no major rivers into Lake Athabasca.

COMMISSIONER THOMPSON: But they cut very deep in this country?

MR. BRINTNELL: They are smaller rivers; they are not large rivers -- not my estimation of a large river. You have the same situation on the other route. You have all the various rivers flowing into the Peace and the valleys are even worse on the Grimshaw route. Using the Peace River and Grimshaw you have to go down and up and down and up.





THE CHAIRMAN: I would like to pursue that a little further. You have pointed out that, along the edge of the river, the ground is level and the grade even.

MR. BRINTNELL: Yes.

THE CHAIRMAN: We flew over it the other day, and, of course, my eye, at least, is unpractised, but to me it did appear that there were quite a few fairly deep ravines coming into the river, some of them apparently with no water at the bottom and some of them with creeks and perhaps a few with rivers.

MR. BRINTNELL: I would call them creeks. I am not contradicting you, but I would call them creeks. There is not much water in them at this time of the year. There is, in the spring, some water.

THE CHAIRMAN: They would appear to have deep ravines, though?

MR. BRINTNELL: Yes; but they are not very wide. They would, of course, have to be bridged.

THE CHAIRMAN: They could easily be bridged?

MR. BRINTNELL: Yes.

THE CHAIRMAN: Would you estimate the total of the ravines you think there are along there?

MR. BRINTNELL: I have never counted them; I have never gone into that.

THE CHAIRMAN: Would there be four or five, or forty or fifty?

MR. BRINTNELL: Well, I don't know. I have





never bothered to count them. There wouldn't be forty-five.

THE CHAIRMAN: I beg your pardon?

MR. BRINTNELL: I wouldn't think there were forty-five. There would not be forty-five; I don't think there is anything like that. But there will be a number of small bridges to cross. But on the other route there is Battle River and Keg River, which are quite substantially-sized streams; and if it is a question of going down into valleys and coming up there that would mean grades coming both ways. You wouldn't go down into these valleys with a railway from north of McMurray.

THE CHAIRMAN: I would just like to stay with this for a moment. Are you advocating that the railway should be built across to the Athabasca with bridges over these deep ravines?

MR. BRINTNELL: I am not advocating the railway -- I am not laying it out -- but I would say, in general, that that is a good route, in my opinion and from my experience.





THE CHAIRMAN: Well, we would like to know the reasons for it as well as we can understand them. I take it that you feel that there are ravines close to the river which would require bridges, but they are narrow and you think the bridges are not serious.

MR. BRINTNELL: No, I don't think it is a serious problem. Railways always have those anywhere; there are always small bridges over small streams and larger ones. There are not any large rivers along there, and, whereas, I say on the other there are quite a few which are larger.

THE CHAIRMAN: We were in McMurray a few days ago and one of the gentlemen there who has been over the country a good deal with caterpillars and on foot -- his suggestion was that he thought perhaps a good route for the railway would be some miles back from the river where these ravines had petered out into perhaps very gentle slopes or disappeared entirely.

MR. BRINTNELL: I am not saying whether they should be on the bank of the river or ten miles in. That is a surveying problem for the engineering department of the railways, to put it where it would be the least expense and the best grade.

THE CHAIRMAN: My recollection is that it was 20 miles in.

COMMISSIONER THOMPSON: This route here





is the one which the gentleman in McMurray advocated, that you went up past some fire tower and then you were more or less up on a plateau; it was quite a grade up from there to there, and you cut down on the number of rivers. You have eight rivers up to that point, he said, to get up away from the bank of the river, and he had been through that country working for oil companies and bulldozed, and he indicated that was the best route, but it gave you quite a considerable grade there. I know that you are up to 2,000 feet at that point.

MR. BRINTNELL: I would just say it would appear to me to be more or less the headwaters of these creeks.

COMMISSIONER THOMPSON: Are you counting the number of rivers you are crossing?

MR. BRINTNELL: 21.

THE CHAIRMAN: Mr. Brintnell, would you suggest a route which might be a feasible one for the railway?

MR. BRINTNELL: Well, as I say, that is -- I have already stated, I have already said that, that I think this would be a good route along here -- not up on the top of this mountain but along here and here. This is not my problem, and I don't think it is anybody's problem here; it is a question of a technical problem. If this is a good route, then I say it is a problem for the engineering





department of the railway to put it either one mile or ten miles, whatever is the best place.

THE CHAIRMAN: What I have in mind is your own evidence that you have flown over it and you know the terrain pretty well. We would like to know the advantages and the disadvantages. I would like to come to the Grimshaw route later, but at the moment you are suggesting that along the edge of the river the surface is pretty level.

MR.BRITNELL: It is level for quite a little bit distance in until you get into the mountains here. They are high mountains, so you should skirt around those. I think that is practical.

THE CHAIRMAN: But you would suggest from your examination of the terrain that the line that I have sketched in here -- I will put an "L.B." on it -- is the --

MR. BRINTNELL: Yes, approximately; not to a mile. There are quite a number of small bridges; they wouldn't involve going into any deep valley and then having to pull out again.

COMMISSIONER THOMPSON: I take it you have travelled from Grimshaw to Hay River?

MR. BRITNELL: Yes.

COMMISSIONER THOMPSON: How many deep valleys do you go into there? You have travelled the highway?





MR. BRINTNELL: No, I haven't travelled the highway.

COMMISSIONER THOMPSON: There is one valley that you go into, that is all. There are no valleys except in Hotchkiss.

THE CHAIRMAN: Which were the valleys that you were concerned with?

MR. BRITNELL: Well, this valley here. That is quite a serious problem, 7 miles of that, 2.4 grade, and it would mean quite a job to overcome; it would be costly to eliminate.

MR. FEEHAN: Which is 2.4?

MR. BRINTNELL: The Peace River.

MR. FOUKS: Which would be the grade if you had to avoid 23 rivers, you had to go west? Which would be the grade?

MR. BRINTNELL: I am speaking of the Peace River.

MR. FOUKS: I am comparing it now to the eastern route you recommended. What would be the grade if you had to go sufficiently west of the river to avoid crossing 23 rivers?

MR. BRINTNELL: I don't think anybody is going to go there. All you have to do is to look at the map to see.

MR. FOUKS: What would be the grade in your opinion?

MR. BRINTNELL: I don't think anybody





knows.

MR. FOUKS: You know the grade is 2.4 on the west route?

MR. BRINTNELL: No, I said at Peace River, right at Peace River.

MR. FOUKS: It is possible it may be more than that?

MR. BRINTNELL: I don't think engineering studies would indicate that. I think engineering studies would indicate this was a flatter grade. I don't think anybody knows where it would be, and I think this would be a better grade.

THE CHAIRMAN: Mr. Thompson, have you any more questions?

COMMISSIONER THOMPSON: No.

THE CHAIRMAN: Mr. Feehan?

MR. FEEHAN: Nothing more, sir.

THE CHAIRMAN: That is all, Mr. Brintnell. Thank you very much.

MR. BRINTNELL: Thank you.

THE CHAIRMAN: Mr. McMeekan, you have looked at those pamphlets during the noon adjournment?

MR. McMEEKAN: Yes, sir. Mr. Campbell will answer, with your permission.

MR. CAMPBELL: We have no questions yet on that one.

MR. McMEEKAN: No, we have no questions.

THE CHAIRMAN: Do you go along with what





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is contained in those two pamphlets, Mr. Campbell?

MR. CAMPBELL: As to enriching uranium and storing it, I think it is probably something that is going to come to pass in Canada. It says here: "Canada should abandon U.S. uranium market." And it says: "Can Canada store electricity?" -- by enriching uranium. I think it is feasible. But I also believe that, in taking into consideration the problem of this Commission, if there were a power development to enrich uranium it should be on the Great Slave or Fort Smith, and it can produce a million horse power there, and if this Commission is to find out which is the better route and better way to get to Pine Point, then I would say that they direct it through Fort Smith and then, at the same time, if it is enriching uranium that B.C. wants, we can get it right here in the northern part of this country or where this railroad is going to end up at.

THE CHAIRMAN: I have not had a chance to read those pamphlets.

MR. CAMPBELL: Would you like me to show them to you?

THE CHAIRMAN: Yes, please.

MR. CAMPBELL: I have just gone over them roughly and briefly, but I was just figuring out what is going to be the question.

THE CHAIRMAN: This question, "Can





Canada store electricity?" -- that deals with enriching uranium.

MR. CAMPBELL: Yes.

THE CHAIRMAN: And your question is, if it is for enriching uranium, you say that that should be done with the power to be developed at Fort Smith.

MR. CAMPBELL: Yes.

THE CHAIRMAN: That is the only thing that arises out of that.

MR. CAMPBELL: Yes. We enrich it here in conjunction with Great Britain or money from other countries.

THE CHAIRMAN: We just wanted to bring it to your attention, because you will be gone when we consider those things.

MR. CAMPBELL: That is what I would suggest. In this Commission being set up, it is to promote the Mackenzie River and not British Columbia, the way I figure it out, and I think we can produce our own power.

THE CHAIRMAN: Mr. Campbell, we omitted to ask you this morning what your occupation is.

MR. CAMPBELL: I am working in mining with Gunnar Mines Limited.

THE CHAIRMAN: You are on the staff?

MR. CAMPBELL: Yes, that is right; I am chief draftsman and design engineer.

THE CHAIRMAN: Have you had much





experience?

MR. CAMPBELL: I went first in Uranium City in 1954. I have been throughout the northern parts of Canada in mining since 1933, and some of that in base metals at New Calumet in Northern Quebec and out here in British Columbia.

THE CHAIRMAN: You are principally concerned with mining?

MR. CAMPBELL: Yes, although we have transportation conditions to contend with in mining; it has to be brought in at a later date.

I should like to say on my brief while I am on my feet, if I may, with your permission, that Mr. Feehan brought up that I had stated that the railroad come through between Lake St. Claire and the Athabasca Lake. I don't think I stated that, although the map that was submitted with that -- I did not draw it up -- it has a marker, a line that passed through that area. Another thing --

THE CHAIRMAN: You don't advocate that as a possible route.

MR. CAMPBELL: No, I personally don't. I would more or less go along with the general contention, and that is follow the route which is the most accessible and with the least amount of grade. The railroads have taken that into consideration, and when they submit their brief I imagine they will have it all down in fine facts and figures.





I would like to say that I mentioned this morning that from Peace Point, although it is a shorter route to Uranium City by air, there is no air base at that particular point at the present time, and if you will check me on your map, from Fort Smith where there is a tremendous undertaking in the way of an airport, it is only roughly in the neighbourhood of 100 miles across to the Uranium City Airport. Right?

COMMISSIONER GAINER: From Fort Smith to Uranium City?

MR. CAMPBELL: Yes.

COMMISSIONER GAINER: It would be more than 100. I would say offhand it would be 150, closer to 200.

COMMISSIONER THOMPSON: 108 air miles.

MR. CAMPBELL: So I am 8 miles out on that estimate. So you see if it isn't feasible to build an airport at the crossing of the Peace, they could then carry on from Fort Smith and carry on from there, during the time that they have to get in the extras.

MR. BALDWIN: I wonder if we should possibly change the brief on page 5. On page 5 of the brief it says: "We are vitally concerned that the route of the proposed Great Slave Lake Railway start at McMurray and go north via Fort Chipewyan and Fort Smith to the Pine Point area." Is it possible to change that in the various briefs?





MR. CAMPBELL: Yes, and if you were listening to me this morning, I think I jumped around that and said the area and not go through direct to Fort Chipewyan.

THE CHAIRMAN: You explained that this morning.

MR. CAMPBELL: I think I did, yes.

COMMISSIONER THOMPSON: I gave you a figure there. It is 132 miles. The airport is at Beaver Lodge.

MR. CAMPBELL: Yes, there is one at Beaver Lodge and one at Gunnar.

MR. FEEHAN: Just in order to keep the record straight, I believe I said that Mr. Campbell said that the ideal situation was to have the railway brought to Fort Chipewyan, and then it was I who suggested it should be brought between the two legs.

MR. CAMPBELL: It will probably be in the record, but I don't recollect saying it should be. I don't think it is feasible.

THE CHAIRMAN: It is all cleared up now; you don't advocate it, and we all know that now, Mr. Campbell.

Is there anything further?

MR. FEEHAN: We had evidence a few days ago from a Mr. Shakespeare from Peace River stating that it would involve at least half a million of horsepower to refine or enrich uranium, and the





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evidence is that there would be only one million horse-power available at Fort Smith. I was wondering if Mr. Campbell could comment on that.





MR. CAMPBELL: What size of plant was he figuring on with this one and a half million.

MR. FEEHAN: I believe his evidence was that a minimum of one and a half horse power would be required to enrich uranium. I think that was his statement. I do not know what size plant he was referring to.

MR. McMEEKAN: May I ask who Mr. Shakespeare is and what his qualifications are?

MR. FOUKS: He is a member of the Peace River Power Development and they are developing Hudson Hope. He has had a great deal of experience. I am sure this field has been discussed with Mr. Southworth and Mr. Shakespeare extensively. In case there are any questions perhaps Mr. Southworth can answer. In respect to uranium Mr. Southworth has had a great deal of experience.

THE CHAIRMAN: Perhaps Mr. Southworth can tell us now what the situation is.

MR. SOUTHWORTH: The power requirement varies, but it is recognised that it may be as high as two million and as low as one and a half million. The power is not constant. The power requirement drops off in this respect that after so many years this plant would be abandoned. This is one of the questions which concerns it ever coming about. The plant would only be in use for a number of years and then abandoned because enough





uranium would be processed in that time to last for some time in the future. Therefore the question is, after enriched uranium is produced, what do you do with the power after you abandon the plant. In other words, if you have enriched sufficient supplies of uranium to last for some time then what do you do with the power? Now, the Peace River people have gathered this into their feasibility and it is approximately a ten year period, they assume. After the plant is built, in ten years after that they would have developed sufficient other markets to take this two million horsepower so it would not be left on their hands. That is rather a sketchy outline.

MR. CAMPBELL: May I ask a question?

THE CHAIRMAN: Yes.

MR. CAMPBELL: On what authority have you the information concerning the curtailment of the power consumption for enrichment of uranium?

MR. SOUTHWORTH: This is a Government statement given to the Peace River people that the plant would be operating for so many years and then it would have to be closed down because they would have sufficient supplies to last for many, many years in the future. This problem was discussed for the simple reason as to whether or not they should build an enriched uranium plant. I believe the capital outlay is around \$600,000,000





and many people are reluctant to advocate a capital expenditure of that size when there is a big question as to whether or not raw uranium can be used rather than enriched uranium. In other words, would it be a question of using more quantities of raw uranium and less quantities of enriched uranium and does the \$600,000,000 expenditure justify using enriched uranium rather than the raw. This is the question and I do not think it has been answered.

MR. CAMPBELL: No, and I do not think you will get an answer to it for some time to come. Scientists say they have yet to produce an answer to the cheaper cost of producing power by water. That eventually will come probably, but until such time I think we are off on the wrong track.

MR. SOUTHWORTH: It is a question between raw uranium and enriched uranium and how much power is necessary and for how long.

MR. CAMPBELL: The indefinite thing is for how long. You say they will shut it down but on what grounds does the Government say that will be done? How do they know the consumption of uranium 25 or 50 years from now?

MR. SOUTHWORTH: You will have to investigate that information.

THE CHAIRMAN: The question you put, how does anybody know anything, can be put to any witness. We could have said to you, "How do you know





this," or, "How do you know that?" We could also say, "What is your authority for this or that?" In taking the evidence here, if we were going to question people's authorities for their opinions we would be going for several years instead of a few weeks which is when we hope to dispose of matters. I think what we should confine ourselves to as well as we can is the evidence that is given to us rather than to somebody challenging the bona fides or the authorities from which somebody else speaks. We will do the best we can to weigh the evidence and certainly if there are any grounds for challenging anything that anybody says on a question of fact we would like to know what it is.

MR. CAMPBELL: If I can refer back for a few moments when Lee Brintnell was on the stand and this gentleman lawyer over here came over and cross-examined Mr. Brintnell, so it seems that is about the size of it. I did not approve of that. I see they won't approve of what I have to say.

THE CHAIRMAN: We are trying to get as much information as we can but I just want to try and keep this thing on an even keel without getting into the position where two opposing points of view are saying, "Where is your authority for that?" and so on. If there is anything else you would like to know about the opinion that Mr. Southworth has expressed we would like to know,





because we want all these facts on the record as clearly as possible.

MR. McMEEKAN: I would like to ask Mr. Southworth how far in the future he thinks it will be before it is decided whether it is advisable for Canada to produce enriched uranium in quantities such as are suggested?

MR. SOUTHWORTH: I wish I could answer that. That is a question the Peace River people would also like answered, but their latest feeling about it is all I am aware of and they feel that they would not be able to find the \$600,000,000. It is not they who have to raise it themselves but I believe it was to be an effort of collaboration by a number of different Governments who would combine to put up the capital required. The write off on the plant is so fast that at the end of ten years, which is another estimate, which I do not know where it came from, but at the end of the ten years this plant is abandoned and is not generally useful for other purposes. Now, they feel in light of this and the fact that raw uranium was being used for some generations where there was not water power that there was only a small chance that an enriched uranium plant would be built. That was the feeling last week but it might change next week in the light of new information.

THE CHAIRMAN: Is there any more





likelihood of enriched uranium plant being built at Peace River than --

MR. SOUTHWORTH: They would like the plant at Peace River and they could provide the maximum power quite readily and after the power was no longer required, if that ever came about, they would be in a good position to have developed other markets for this power by that time. In other words, they believe their transmission system would be established and they would have customers waiting for this two million horsepower. The fact that uranium is concentrated and easy to move, relatively, they feel that the location of a plant was related more to the availability of power rather than to the source of supply of uranium. This is the general principle involved, I believe.

THE CHAIRMAN: I thought you said a few moments ago that your clients thought that it was unlikely that an enriched uranium plant would be built in the near future?

MR. SOUTHWORTH: Yes, it is supposition, if it is to be built, that is where it should be built, but they think it is unlikely at this time.

THE CHAIRMAN: When is it thought it is likely that it may be built?

MR. SOUTHWORTH: This is not within their power, it is a Government question of whether or not the Government of Canada and other Governments with whom they would collaborate to raise the capital





would get together.

THE CHAIRMAN: Is it fair to put it this way: Your clients feel it is unlikely that such a plant would be built but if it should be built then you are suggesting that the better place for it would be in the Peace River area just about the vicinity of Fort Smith?

MR. SOUTHWORTH: That is their thinking, yes.

COMMISSIONER GAINER: The main reason being the proximity to the main market, they would hope to absorb these amounts in the country south?

MR. SOUTHWORTH: That is the principle. When the two million horsepower is no longer required they have a way of disposing of it. This is one of their key reasons for requiring it over there.

COMMISSIONER GAINER: I presume that this figure one and half million minimum requirement is related to the scale factors in the enrichment plant. Is there any possibility that the scale of operation could not be reduced?

MR. SOUTHWORTH: You are out of my scope now.

COMMISSIONER GAINER: This did seem to be the far minimum, one and a half million to make it economical at all.

MR. SOUTHWORTH: Yes, I would have to inquire further as to the size of that plant. This





may be a factor of physics which I do not understand. I do not think it is a matter of strict economics because this seems to have been the figure always used.

THE CHAIRMAN: Mr. Southworth, I made a note of Mr. Shakespeare's estimate of power that could be developed at Fort Smith and I thought it was in my book, but apparently it is in my copy of his brief and I have not that with me. My recollection of the power that could be developed at Fort Smith was something over two million horsepower.

MR. FEEHAN: Perhaps I can answer that. I have the Commissioner's report from the Northwest Territories and I can read from page 13.

THE CHAIRMAN: Very well, will you read it?

MR. FEEHAN: "Two schemes for the harnessing of water and generation of power may have some bearing upon the railway question. One of these is a very large plan to harness the Peace River in the vicinity of Hudson Hope B.C. and to generate up to five million horsepower to serve the local area, adjacent portions of the Peace River district in Alberta, and the lower B.C. mainland. The other is a plan to develop hydro power on the Slave River between Fort Fitzgerald, Alberta, and Fort Smith, Northwest Territories. This would be, by comparison, a relatively modest but still





substantial project capable of producing ultimately about 870,000 horsepower."

MR. FOUKS: Mr. Shakespeare said 750,000 to one million, I think.

MR. BALDWIN: He said five million when he talked about the whole thing.

THE CHAIRMAN: Ten million for the whole thing.

MR. BALDWIN: Five million downstream and five million upstream at Hudson Hope.

MR. SOUTHWORTH: May I say that some of the members of the British Columbia Government have been checking this horsepower and their figure is identical to that presented by the Commissioner of the Northwest Territories, about 870,000. This is year round, the freezing of the river apparently has little influence on the amount of power which can be generated.

COMMISSIONER GAINER: That would be with or without upstream control?

MR. SOUTHWORTH: Upstream control is a necessity.

COMMISSIONER GAINER: And this would assume that control had been achieved?

MR. SOUTHWORTH: The power at any point on the Peace River and on the Slave River appears as on the firming of the river at Hudson Hope. That is the reason it is the maximum potential.





Of course, you could generate power there now but not at the potential possible once the Peace River is firmed by the Peace River project.

COMMISSIONER GAINER: One thing I forgot to ask Mr. Shakespeare: This would cover a project on the Smoky River which has a high potential of the tributary. I do not think he indicated whether that was in his plan or not.

MR. SOUTHWORTH: I cannot answer that.

COMMISSIONER GAINER: There is no use controlling upstream, if you do not go all the way down. There is some use but you would have to work on the high potential tributaries all the way down.

MR. SOUTHWORTH: As Mr. Shakespeare outlined, I think it is generally recognised if you can develop the river as a whole the effects are much greater than if you develop it piecemeal or without one part being developed in connection with another.

COMMISSIONER GAINER: Well, to summarise, the 870,000 figure is a maximum?

MR. SOUTHWORTH: As I understand it is a maximum. As Mr. Shakespeare pointed out it is a run of the river dam with a very limited reservoir. There are no river banks at Fort Smith to make a reservoir so it has become a run of the river dam depending on the control of the upper river.

THE CHAIRMAN: Anything else?

MR. McMEEKAN: Is there anything more you





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would like to ask us?

THE CHAIRMAN: I think not. Thank you very much, gentlemen.

MR. BRINTNELL: Mr. Chairman, I would like to say something: I would like to reiterate I do not represent any interest at all in this statement. I am only interested in facts and most economic and best development of the Northwest Territories and Alberta.

THE CHAIRMAN: Yes, Mr. Brintnell, you said that in your brief and we appreciate it all the more because of your preparing the brief and letting us have it. Thank you very much.





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SUBMISSION OF  
UNITED GRAIN GROWERS LIMITED

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Appearances:

Mr. George Edworthy

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THE CHAIRMAN: Would you like to read the brief from there, Mr. Edworthy?

MR. EDWORTHY: I think this is fine.

THE CHAIRMAN: I should say that you are perfectly at liberty to elaborate on your brief as you go along.

MR. EDWORTHY: Yes.

The Board of Directors of United Grain Growers Limited is anxious to place its views before your Commission to assist in your survey of the proposed alternate routes to be taken in the extension of railway service to Pine Point, N.W.T.

United Grain Growers Limited is the oldest farmers' cooperative grain handling company in Western Canada, having been organized in 1906. It is owned by approximately 50,000 farmer-shareholders. These are organized into locals which annually appoint delegates to the Annual Meeting of the company. Approximately 300 delegates, so appointed, constitute the Annual Meeting which reviews the affairs of the company, discusses questions of interest to





agriculture and elects the directors to act for them during the year. The company operates a line of approximately 785 elevators across the prairie provinces with terminals at the lakehead and Vancouver.

To digress, as you suggested, for a moment from the script, Mr. Chairman, I might mention that we have in the Peace River country, as evidence of our interest, 51 elevators -- the largest line of elevators in the Peace River. We have eighteen of the local boards referred to, who appoint delegates, and we have in the Peace River area some 2500 shareholders.

It conducts a large business in distributing to farmers various farm supplies, through country elevators and other channels. Through a subsidiary company it publishes "The Country Guide", which has the largest circulation of any farm monthly in the Commonwealth. Another of its publications is "Canadian Cattlemen", devoted to the beef cattle industry. The company is affiliated with the Alberta Federation of Agriculture and the Manitoba Federation of Agriculture and Co-operation. It is a direct member of the Canadian Federation of Agriculture and is represented on the executive of that body.

These various connections give the company some knowledge of farm problems in Western Canada and bring it into contact with various currents of farm thinking. The annual meeting of the company in particular, provides a forum for the consideration





and discussion by delegates of issues of importance to agriculture as well as those which affect specific areas. The Pine Point rail extension is considered such an issue and at the last annual meeting the following resolution was unanimously passed by the attending delegates:

"Resolved that the delegates assembled in  
"Annual Meeting of United Grain Growers Limited  
"hereby strongly support the demands of the  
"farmers residing in the Peace River area of  
"Alberta that the proposed railway to open  
"up mineral deposits at Pine Point should be  
"built commencing at Grimshaw, Alberta.

"A large area of land north of Grimshaw was  
"opened up for settlement by the Government  
"of Canada and many farmers have been en-  
"couraged to settle and have settled there  
"with heavy investment of labour and money.  
"They have had every reason to hope that any  
"extension of rail facilities into the north  
"would take reasonable care of their transporta-  
"tion needs. To build the railway over another  
"Alberta route suggested by some interests  
"would serve no agricultural area and would  
"be unfair and unjust to the large number of  
"farmers above referred to."

It is to be noted that this resolution was





passed despite the fact that the company, as a commercial entity, far from reaping any immediate advantage if the extension from Grimshaw is chosen, would face a substantial loss as much of its plant in Grimshaw would no longer be required and would have to be replaced by other facilities along the proposed line of railway.

Yet, fully recognizing the position our company will be placed in with an extension from Grimshaw, we unhesitatingly confirm the stand of our delegates in passing the resolution we have quoted. Not only do we feel that those who settle the area, both farmers and others, should be considered, but the Grimshaw route compared to the Waterways route offers a much greater and more immediate prospect of contributing importantly to the economic development of Canada.

Of approximately 75,000 people who are presently established in the Peace River area more than 10,000 of that number would immediately be served by the Grimshaw route. The population which would be served by the Waterways route -- north of McMurray -- is less than 1,000. Nor is it to be expected that, with mining the major industry to be served by the Waterways route, the population increase will be as rapid as north of Grimshaw where agriculture, forestry, petroleum and natural gas industries are already well established. (Figures taken from Report of Royal





Commission on the Development of Northern Alberta).

To indicate the development of agriculture in the area the following table shows the total grain marketings at Grimshaw for a six-year period.

I will quote the year and the acreage and then the production.

THE CHAIRMAN: If you give us the total there that might be all right. We all have copies of the brief.

MR. EDWORTHY: In the six-year period the wheat production was 5,751,000 bushels; oats was 1,386,000 bushels; barley, 2,395,000 bushels; flax, 896,000 bushels; rye, 63,000 bushels; making a grand total of 10,491,000 bushels.

I might say in this connection that, since this brief was prepared, I saw figures released by the Board of Grain Commissioners, which showed that the ten-year delivery at Grimshaw was almost exactly 1,750,000 bushels, which is just about the average disclosed by these figures.

THE CHAIRMAN: That is the total amount of wheat?

MR. EDWORTHY: No, on grains -- one and three-quarter million bushels.

Incidentally, Grimshaw is the largest grain marketing point in Alberta in the last ten years. In all Canada it is only exceeded by one point, and that is Meadow Lake, Saskatchewan, and by a very





small margin.

THE CHAIRMAN: I notice that there is quite a drop.

MR. EDWORTHY: In the Peace River country. That can be explained by adverse growing conditions in recent years. We have, in the Peace River area in the last few years, harvested the lowest average of crop almost in its history.

THE CHAIRMAN: Adverse weather conditions?

MR. EDWORTHY: Adverse weather conditions.

THE CHAIRMAN: Through the last three years?

MR. EDWORTHY: Drought. You will see the acreage hasn't suffered.

THE CHAIRMAN: It has increased?

MR. EDWORTHY: Yes, increased substantially.

MR. BALDWIN: Last year it was a question of frost and snow. I was closely in touch with the Prairie Farm Assistance Act, and during the two-year period -- last year and the year before -- the Prairie Farm Assistance Act paid, in the Peace River, something over \$4 million because conditions in those crop years were very disastrous.

THE CHAIRMAN: It looks to me as though the last three years have been bad.

MR. EDWORTHY: That is right.

MR. BALDWIN: Yes, that is right. I was particularly concerned with the last two years as they related to the Prairie Farm Assistance Act





payments which I investigated.

MR. EDWORTHY: Grimshaw has, on occasion, been the largest grain-marketing point in Canada the odd time during the last ten years, but its average is not the top; it is very close to it.

It is emphasized that the cost of marketing much of this grain imposed an extremely heavy burden on the producer, represented by high trucking charges. For example, grain was delivered from points as far as Fort Vermilion, a distance of 225 miles. From such points the trucking rate for grain is 50 cents per bushel -- that is really from Fort Vermilion. (For cattle \$10 per head, hogs \$4 to \$5 each). Conversely all freight shipped into these northern districts, which means practically everything used, is subject to a similar scale of trucking charges.

Nor should it be assumed that because of geographic location the quality of grain in this area is inferior. Grades of grain delivered show quite the contrary. Our company's records for the year 1958-59 (considered a normal year so far as quality of crop is concerned) show that of wheat delivered to our Grimshaw elevator approximately 65 per cent was within the four top statutory grades (Manitoba Northerns). It is to be noted too that on at least six occasions Peace River farmers have been awarded world championships with their grain exhibits at the Toronto Royal Winter Fair. These





were:

- 1936 - Herman Trelle, Wembley - Wheat Championship  
1938 - Justyn Rigby, Wembley - Oat Championship  
1939 - Lloyd Rigby, Wembley - Wheat Championship  
1953 - Tom Corlette, Clairmont - Clover Championship  
1955 - Robert Cochrane, Grande Prairie - Wheat  
Championship  
1958 - Stanley Weston, Fort St. John - Alfalfa  
Championship.

The substantial grain marketings referred to at Grimshaw indicate something of the potential which may well be developed if the railway is extended north from that point.

In addition to the 2,200,000 acres now cultivated, Northern Alberta contains 14,500,000 acres of arable land not yet under cultivation. Of this it is estimated that 3,500,000 acres lie within an area that would be served by the Grimshaw route. This is in contrast to the insignificant agricultural area which would be served by the Waterways route. Of the limited potential in this area the most suitable land is that south of McMurray which is tributary to and now served by the existing rail facilities. (Report of Royal Commission on Development of Northern Alberta).

Here it might be appropriate to point out that while there is a tendency to think of much of Northern Alberta as the frozen north, this is not in accord with fact. Actually there is little





noticeable change in climate as one goes north from the town of Peace River. It is a fact, nevertheless, that frost-free days do increase as one approaches the northern boundary of the province.

Placing emphasis on the productive potential of Northern Alberta may pose the question, why develop new land when agricultural products are currently in surplus in the major export countries of the world? What leads to the expectation that Western Canada will continue to find markets, both domestic and export, for its grain? Two answers may be given.

First, steady growth in world population has provided such markets in the past and presumably will do so in the future. Population growth in Russia and in India (including Pakistan) shut off former wheat exports from those areas to the United Kingdom, and left a gap to be filled by Canada when prairie agriculture began to develop. Hungary and other countries of the Danubian basin, formerly the granary for western Europe, no longer export food to that area. Egypt, which once fed Imperial Rome, now imports wheat. So also it is population growth in Japan which results in that country importing grain at an increasing rate.

Secondly, the trend towards higher standards of living, although in places it reduces the human consumption of cereals, calls for more grain to be fed to livestock and to poultry, as well as a





diversion of land to other products.

There can be no doubt as to the startling present rate of population growth. At the beginning of the 19th century the rate of growth was 0.3 per cent annually, while figures are now compounding at the rate of 1 per cent annually. World population in 1650 was stated at 545 million. For the present year it is approximately 2.9 billion and the prospective population in 1987, only 28 years from now, is calculated at 6.6 billion.

It must be remembered that the present world surplus of wheat is due very largely to extreme measures in many wheat producing countries of subsidizing production. That is true in the United States of America. Without these measures there would be no surplus today. This phase in world production will pass and the proposed railway will not be many years old until there will be a good demand again for the grain production of Western Canada.

We do not assume to predict population growth in Northern Alberta and the Northwest Territories. We understand estimates have been made that the population of the Peace River country may be as high as 210,000 by 1987 and that a potential population of 60,000 in the Northwest Territories will create substantial local markets for agricultural products. Settlement of frontier areas, followed by extension of rail services, creating new industry





and the development of natural resources, has ever been the pattern of expansion in Western Canada.

To the extent a nation's welfare is dependent on its natural resources, the area to be served by the Grimshaw route has a marked advantage. In addition to its high agricultural potential the area's timber, oil, gas and mining resources at least equal and, by some standards, surpass those which would be served by the Waterways route. There has been steady and successful development of the oil and gas resources throughout the Peace River block, much of this in the northeast section. Only the Grimshaw route, providing transportation for gas and petroleum products in their various forms, can bring maximum benefit to the area as a whole. The resultant freight earnings should yield a considerable revenue to the railway. For examples of what expansion in this industry can mean to communities when served with rail transportation we point to Dawson Creek and Fort St. John where development has, and is currently progressing at a highly accelerated rate.

We have no knowledge of the technical problems involved in building a railway from either Grimshaw or Waterways or the probable cost. We understand the route from Grimshaw is some 30 miles longer than the eastern route, but that extra mileage is offset by problems of bridge construction necessary





for the eastern route.

To the extent that the Dominion may subsidize the construction of the railway line, any difference in cost will be a small price to pay to meet the obligation which the Dominion owes to the people who have settled and developed the farmlands of the area.

We respectfully submit the Dominion has an obligation to them. It is our belief that when the Dominion throws a large frontier area open for settlement and encourages settlers to expend money and labour in establishing homes and farmsteads there is implicit in that act the promise that in due course reasonable facilities will be provided for the farming community. That involves facilities for transporting their produce to market.

The settlers in the area north of Grimshaw have done their part. They have waited long for railway facilities. Without railway facilities the cost of moving farm produce to market is excessive. It is our simple submission that, as a matter of good faith, the Dominion should require this railway to serve this fine agricultural area in order that it may make its full contribution to the economy of Canada.

Respectfully submitted.

THE CHAIRMAN: Mr. Edworthy, we will probably have a few questions to ask, but I would suggest





that we have a five-minutes' adjournment.

MR. FEEHAN: Before the adjournment, I have an apology to make to Mr. Campbell who has just given evidence here a few minutes ago.

Without deliberately trying to mislead him I said that Mr. Shakespeare had said that it would take a minimum of one and a half million horse power of electricity to enrich uranium. I find, now, that I was in error, and I would like to make that known to the Commission immediately; and I would like to apologize for misquoting him. I didn't do it deliberately.

Mr. Shakespeare states on page 5 of his brief: "A plant to produce enriched uranium requiring "up to one million horsepower of electricity, "would be a most logical development close by "the site of this huge hydro-electrical "project."

MR. SOUTHWORTH: May I add this, which may, in part, answer Mr. Campbell's question as to what percentage of various sizes could be built, that in the discussions that I have been connected with it has always been one and a half to two million.

If the Commission wishes we could look into the information and obtain whatever information we can get.

THE CHAIRMAN: I think we would be glad to know.





MR. SOUTHWORTH: I will be happy to do so.

THE CHAIRMAN: I think we should assume, unless it is corrected, that Mr. Shakespeare's estimate in his brief is his considered opinion.

MR. SOUTHWORTH: This may become an important question. We will try to get whatever information we can on the sizes of plants and what sizes are possible.

THE CHAIRMAN: I would appreciate that, because Mr. Shakespeare felt it was of some concern to their project.

MR. FEEHAN: I agree.

THE CHAIRMAN: Would you mind getting in touch with Mr. Campbell, Mr. Feehan?

MR. FEEHAN: I certainly will. I think I took him off guard when I told him an expert had said that. He was unable to reply; and it wasn't fair to him.

THE CHAIRMAN: If you would get in touch with him, Mr. Feehan.

MR. FEEHAN: I will do that.

---Short recess.





THE CHAIRMAN: Have you any questions to ask Mr. Edworthy, Mr. Gainer?

COMMISSIONER GAINER: One point. Am I correct in assuming that if your firm, for instance, were to construct elevators, let's say, one hundred miles north -- let's say Keg River, for instance -- do you have any idea what the freight rate on that grain moving east towards the coast would be as compared to Grimshaw?

MR. EDWORTHY: I think I can perhaps make a very close estimate, using a couple of points on the existing line of railway as an example. For example, I jotted this down at noon, anticipating perhaps that question would be asked, and this comparison would give the picture perhaps at Fort Vermilion, although it is unlikely we would build an elevator there. But Edmonton to High Prairie, a distance of 239 miles, the difference in freight rate between Edmonton and High Prairie to Vancouver is 5 cents a hundred pounds, 3 cents a bushel on wheat, as against a trucking charge in existence, say, for Fort Vermilion of 50 cents a bushel. Take a 50-mile haul, assuming that --- I think I am not too far out when I say that, apart from very short hauls, the truck hauling costs would work out about quarter of a cent per bushel per mile. So on a 50-mile haul the cost would probably be  $12\frac{1}{2}$  cents a bushel. Taking the freight rate from Edmonton to Westlock, for example, the freight rate is 2 cents a hundred pounds, 1.2 per





bushel.

COMMISSIONER GAINER: What I was really interested in was this: your company in buying grain at Keg River and shipping to terminal facilities -- whether or not it was the same amount as to Grimshaw?

MR. EDWORTHY: The only difference in price would be our costs, the extra freight we would have to pay, which would be a very nominal amount, because you could go, on the basis of rates which are in existence today, as far as Fort Vermilion for 3 cents a bushel.

COMMISSIONER GAINER: So the major benefits of the rail transportation would accrue almost entirely to farmer shippers in the sense that the rail charges would be lower than trucking and additional revenue would accrue to the railroads.

MR. EDWORTHY: That, of course, is a debatable point.

COMMISSIONER GAINER: Aside from the Crow's Nest rates, given the rate?

MR. EDWORTHY: If it is grain you were moving into a domestic market, which is hardly likely it would, it would be higher on that type of movement. This particular area is extremely well suited for the production of forage crop seeds and clovers, and the building of a railway in there would, I am sure, increase the acreage in forage crops and clovers.

COMMISSIONER GAINER: Even using the higher





rates shipping from Grimshaw to some distant point, the additional amount charged by the railroads would be very small?

MR. EDWORTHY: Yes.

COMMISSIONER GAINER: Although there would be considerable savings to farmers, I presume?

MR. EDWORTHY: Yes.

COMMISSIONER GAINER: Does this seem to be a generally fair evaluation, having in mind the distance you ship grain and clover seed, and so on, from Grimshaw at the moment?

MR. EDWORTHY: Well, of course, I have only taken these examples to show what the freight rate might be. These rates would be established by the railroads. I don't think I am too far out. I don't think they could justify making any higher charges on that line, and if the railway was associated with the present railway that is operating up there, they would come under the Crow's Nest Agreement and would have to fix their rates accordingly.

COMMISSIONER GAINER: I am asking these questions because almost certainly later evidence will be digging into this in greater detail. But from the point of view of a line elevator operation, you wouldn't expect the additional freight, 100 miles and 150 miles, would reflect very much on the price you pay to farmers?

MR. EDWORTHY: It would substantially





increase, to the extent that he -- take again Fort Vermilion as an example, which is extreme, I admit. It is conceivable that the farmer would receive as much as 40 cents a bushel more for his wheat.

COMMISSIONER GAINER: The price you pay Grimshaw now would probably be only slightly higher than the price you would pay if freight went into Keg River?

MR. EDWORTHY: That is right.

COMMISSIONER GAINER: It would only reflect the marginal freight cost?

MR. EDWORTHY: That is right.

COMMISSIONER GAINER: That is all, Mr. Chairman.

THE CHAIRMAN: I am interested in your suggestion that the farmer at Fort Vermilion might get 40 cents a bushel more for his wheat.

MR. EDWORTHY: As I say, that is an extreme example, because it is hardly likely we would construct an elevator at Fort Vermilion; but certainly at a 50-mile point and other points as well the saving would be very substantial.

THE CHAIRMAN: Does that run the risk -- or are the railways saying that they would be carrying wheat into Grimshaw at such a low figure that it won't pay for the cost of the railway?

MR. EDWORTHY: Well, I don't feel that I am competent to say whether their costs would be retrieved out of the movement at all. It is a bulk





movement, of course, as you realize, and it is a movement which is handled very easily by the railways.

THE CHAIRMAN: You are not in a position to tell us what you think the railways can carry wheat for over a route like that, with the operating costs and something towards capital costs?

MR. EDWORTHY: I am certainly not in that position.

MR. FEEHAN: Mr. Edworthy, I would like to refer you to the purpose of this Commission, which is for the purpose of providing access to and contributing to the development of that portion of the Territories tributary to Great Slave Lake. Now, if the purpose of this Commission is to provide that access to the Territories, that is the Northwest Territories, and the tributaries to the Great Slave Lake, would it be fair to say that if the railway were built through the Precambrian Shield there would be a greater likelihood of developing the Northwest Territories as far as the mineral position is concerned?

MR. EDWORTHY: Well, I think we haven't attempted to appraise that angle of it too much, I don't think, although, generally speaking, I would say that our feeling is that a railway on the western route would very largely serve the purposes as you have outlined it in the objects of this Commission, and at the same time it would have the side effect of taking care of this splendid group of people who





have worked in that country for so long and made a living with great hardship due to isolation.

MR. FEEHAN: Let's assume there are minerals in the Fort Smith area. Can you tell me in what way a railway through the Peace River would contribute to the finding of those minerals?

MR. EDWORTHY: I can't answer that question.

MR. FEEHAN: It strikes me that this is the whole purpose of the Commission.

MR. FOUKS: Fort Smith?

MR. FEEHAN: The Fort Smith area and the Precambrian Shield, the finding of orebodies and the development of the area as a whole.

MR. FOUKS: At this point I would like an interpretation of the basis of the Commission, because at this point I separate immediately.

MR. FEEHAN: Maybe I should rephrase my question.

MR. FOUKS: You sure should, sir.

MR. FEEHAN: Let's say one of the most important things to be developed and to be provided access are the purported mineral deposits in the Precambrian Shield. If this is so, then doesn't building a railway through the Peace River defeat that important purpose?

THE CHAIRMAN: I wonder if Mr. Edworthy hasn't answered your question in saying that he has directed his attention to agriculture and the





advantages that would accrue to the people of the area north of Grimshaw if the railway were to follow that route. Is that right, Mr. Edworthy?

MR. EDWORTHY: Yes, that is right.

THE CHAIRMAN: You have been engaged in the grain business and you haven't concerned yourself with the mines and minerals, and Mr. Feehan, to have those questions disposed of, will have to ask someone else?

MR. EDWORTHY: An expert.

MR. FEEHAN: I think it can be maintained that the purpose of this Commission is not to open up the Peace River area but to open up the North.

THE CHAIRMAN: I don't think it is going to do any damage to the North if it is also going to do some good to Peace River. We are asked to consider a report on the merits of both routes, and we are certainly interested in hearing everything that would be said which would be an advantage to each of the two routes, and Mr. Edworthy has been good enough to give us a brief on some of the advantages which would accrue on building it along the western route.

I take it you are not trying to weigh the merits of one route against the other?

MR. EDWORTHY: Our primary purpose was to bring to your attention the need for the western route from the point of view of agriculture and the people in there.

THE CHAIRMAN: Are you satisfied now, Mr. Feehan?





MR. FEEHAN: I am, sir.

THE CHAIRMAN: I have a question, Mr. Edworthy. Would you mind referring to page 5 of your brief? You have there two answers to the question of why new agricultural land should be opened up, and the first one you give is that there is a steady growth in world population which is providing increased markets, and you pointed out that the population growth in Russia and India has shut off former wheat exports. Have these things led to any further increase in export markets for grain?

MR. EDWORTHY: I am going back quite a number of years before those exports were shut off, and those contributed very largely to the agriculture in the Prairies. One of our problems today, perhaps our biggest problem today, in disposing of wheat in world markets is the subsidized production, which has become subsidized over-production on account of other countries producing wheat.

THE CHAIRMAN: What hope is there that conditions will change?

MR. EDWORTHY: Well, in quite a large measure many of these countries who subsidize their wheat crops to such a large extent today could actually put that land to more productive use through the growing of other crops rather than the growing of wheat, and as their currency position improves, as it has improved in some western European countries, I think you will find





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them more inclined to buy wheat which can be grown cheaply elsewhere rather than try to produce it at home.





THE CHAIRMAN: Do you feel hopeful that trading relationships, which is the basis of these things, are bound to improve in the future -- that is, that many countries will be willing to forego domestic grain production and buy our grain without an automatic reciprocation on our part to buy their products, or on the part of other countries?

MR. EDWORTHY: Well, we are hopeful; I will say that. It is a big question.

THE CHAIRMAN: You are hopeful that the United States will stop subsidizing wheatgrowers?

MR. EDWORTHY: Yes.

THE CHAIRMAN: Is there anything you can point to in support of your hope?

MR. EDWORTHY: Well, not particularly at the moment, other than thoughts that have been expressed by President Eisenhower and Benson and others -- their desire to get away from subsidizing agriculture.

THE CHAIRMAN: Subsidies have not been decreased, have they, over the past few years?

MR. EDWORTHY: Not substantially, no. They have, to some extent. I haven't got the actual figures. I didn't anticipate getting down into this angle of the thing.

THE CHAIRMAN: It is a matter that has been referred to by several others -- why should we go to the expense of opening up this new wheatland, or agricultural land, when we already have a surplus.





MR. EDWORTHY: Mind you, there is no doubt if we don't continue to open up new land we are going to go back -- our acreage is going to be reduced rapidly.

We only have to look at the situation that exists in this area today, with the growing industry in the area surrounding Edmonton; the development which is the big airfield at Leduc which is taking out a large section of highly-productive land. Things of that nature are taking place right across Canada today, east and west; through the fruit growing areas in Ontario and so on. There has to be an increase or there is going to be a decrease otherwise.

THE CHAIRMAN: Well, industrial development doesn't account for very much land being taken up, does it?

MR. EDWORTHY: Well, it does and it doesn't.

THE CHAIRMAN: Two or three townships around Edmonton?

MR. EDWORTHY: Yes; but the effect around Edmonton is more than that. We are finding that areas 25 or 30 miles from Edmonton -- and even further -- which were grain-growing areas are today milk-producing areas. As the city grows the milk industry grows and that affects grain production even more than industry does.

THE CHAIRMAN: As this process has been going on over the past ten years has it reduced our





grain surpluses?

MR. EDWORTHY: It has reduced our acreage.

THE CHAIRMAN: What about our grain surpluses?

Have they been coming down, or increasing?

MR. EDWORTHY: I can't say we have decreased our surpluses very much.

THE CHAIRMAN: Mr. Baldwin might be interested in these figures you have on page 3 of your brief.

I thought, Mr. Baldwin, when you were giving us your brief, you suggested that there was less grain being grown and more flax and rye in the Peace River area?

MR. BALDWIN: I think I pointed out that there was a trend in that direction, from my own observations.

You see, the figures Mr. Edworthy has given don't include the grasses and the small seeds; they are not included here; and I think the acreage, if they were included, might be a lot more extensive.

As a matter of fact, I discussed this matter with Mr. Harper from the Farmers Union and he is going to try to get some information at the time Mr. Nelson presents his brief, as to the general trend in that direction.

I don't know whether it can be related to Peace River -- whether it can be worked out in specific areas -- but there isn't any doubt that there is a considerable trend to the grasses and other forage crops.

THE CHAIRMAN: Just looking at the table it looks as though from 1952 to 1958 the acreage has





gone up from 187,000 acres to 250 odd thousand acres.

MR. BALDWIN: Yes.

THE CHAIRMAN: For grain.

MR. BALDWIN: Yes.

THE CHAIRMAN: This is a substantial increase, isn't it, in the acreage seeded to grain during these years?

MR. BALDWIN: Yes. I think I also pointed out that in a period of some few years -- and I think it is almost comparable to this -- that the cattle population has gone up.

THE CHAIRMAN: During those years?

MR. BALDWIN: I don't say it is comparable, but I think it is close to this; so you would naturally take it that the grain which has been grown was being fed to them. The head of cattle increased from 50,000 to almost 100,000 during, I think it was, an 8-year period. That information is available and is on file.

THE CHAIRMAN: And I think you gave it to us.

MR. BALDWIN: Yes. While I am on my feet I would also like to say, in regard to this brief, that Mr. John Brownlee, the President of the company, was largely interested in preparing it, and, of course, Mr. Brownlee was a member of the Advisory Council which attended the international conference in connection with the establishment of new agreements.





I think it might well be on record as to his particular qualifications in addition to Mr. Edworthy's own qualifications. That is correct, isn't it, Mr. Edworthy, that Mr. Brownlee was instrumental in the preparation of this brief?

MR. EDWORTHY: Yes.

MR. BALDWIN: And the fact and information in it, though necessarily to some extent of a speculative nature, reflect his many years of experience in connection with grain-marketing and world conditions.

MR. EDWORTHY: I might say that it was fully expected that he would deliver the brief today, but unfortunately he was called east and he couldn't be here.

THE CHAIRMAN: If there is anything more you could get for us on the subject of increased markets for grain I would appreciate having it, and I think my colleagues would, too.

I gather you suggest that you weren't quite prepared for that question that I put to you?

MR. EDWORTHY: That is right.

THE CHAIRMAN: If you could give us more we would be very pleased to have it.

MR. EDWORTHY: All right.

COMMISSIONER GAINER: Offhand, would you know whether or not your shipments from Grimshaw are all moving east to the lakehead?

MR. EDWORTHY: A very large percentage of





our shipments from Grimshaw are moving to Vancouver.

COMMISSIONER GAINER: There has been a substantial reshuffling in the pattern?

MR. EDWORTHY: That is so; to a considerable extent; there is a distinct freight advantage in favouring Vancouver and that has a bearing on the movements of grain.

COMMISSIONER GAINER: As opposed even to shipping through Edmonton?

MR. EDWORTHY: Yes.

COMMISSIONER GAINER: As in the early years?

MR. EDWORTHY: Yes. You see, the Vancouver freight rates -- Grimshaw is 26 cents; to Vancouver, 36 cents.

COMMISSIONER GAINER: How does that compare with the P.G.E. rate to Vancouver?

MR. EDWORTHY: The P.G.E. rate from Fort St. John is 25 cents.

COMMISSIONER GAINER: 25 cents as against...

MR. EDOWRTHY: ...the 26 from Grimshaw.

THE CHAIRMAN: From Grimshaw it goes down around Grande Prairie?

MR. EDWORTHY: It comes down through McLennan -- Peace River and McLennan -- and into Edmonton and out west either on the CNR or the CPR, depending on the kind of equipment the grain is loaded on.

MR. BALDWIN: Would you mind asking Mr.





Edworthy whether, when the P.G.E. made contact at Dawson Creek with the N.A.R., there was a reduction in the N.A.R. charge to Vancouver on domestic grain?

MR. EDWORTHY: Yes, there has been.

MR. BALDWIN: Since the connection was made?

MR. EDWORTHY: Yes.

THE CHAIRMAN: There has been a reduction?

MR. EDWORTHY: Yes.

THE CHAIRMAN: By how much?

MR. EDWORTHY: I haven't got the domestic freight rates here. They became competitive. I haven't got the old freight rates here. But it was quite a substantial reduction.

The export rate, which I am more familiar with than domestic rates, from Dawson Creek to Vancouver was 30 cents on the N.A.R. On the P.G.E., when they came into Dawson, they established a rate of 25 cents.

THE CHAIRMAN: And Dawson to Vancouver was 36?

MR. EDWORTHY: Yes. There was a switching charge of one and a half cents a bushel from the N.A.R. to the P.G.E.; which means if you load your grain on the N.A.R. and ship it over the P.G.E. to Vancouver for export the rate would be  $26\frac{1}{2}$  cents.

Now, actually the N.A.R. have not reduced their export rate. There is rather a peculiar situation existing there today. There has been no grand move





out of Dawson on an export rate since the P.G.E. went into Dawson.

There are several reasons contributing to this. One reason is that there was a very light crop in the Dawson area last year and very few shipments were necessary; and any shipments there were of grain could be used in the domestic markets in Ontario and British Columbia; and there were substantial shipments made in that way to Ontario and British Columbia.

The N.A.R. reduced their domestic rate so that if the buyer in British Columbia preferred to have his grain loaded by the CPR it can be shipped NAR/CPR to that point at the same rate as it can be shipped PGE.

THE CHAIRMAN: But the PGE coming in has made a saving of  $3\frac{1}{2}$  cents a bushel?

MR. EDWORTHY: Well, 5 cents a hundred.

THE CHAIRMAN: It is  $26\frac{1}{2}$  cents. Is that per hundred pounds?

MR. EDWORTHY: Their rate is 25; the other cent and a half is a switching charge. The 5 cents a hundred is 3 cents a bushel...

THE CHAIRMAN: Is it right to say that whereas it did cost the farmer 30 cents a hundred it now costs him  $26\frac{1}{2}$  cents a hundred?

MR. EDWORTHY: As a matter of fact, there is rather a peculiar situation existing. So far all seed grain is brought to Dawson Creek on the basis of 30 cents a hundred pounds, which is the NAR freight rate,





and we have been told by the Seed Board, that if we ship any seed on which we pay an export rate of less than that we shipped over the PGE they will debit us for the advantage we have gained in shipping it that way. So I think before many moons the Dawson Creek export rate will be recognised as  $26\frac{1}{2}$  on the NAR, but it hasn't been recognised yet.

I think we are getting down a blind alley here, but these are the facts of the situation which I have given you.

COMMISSIONER THOMPSON: Am I right in understanding that we are not supposed to discuss the Pine Point railway? On that last question I initiated, Mr. Feehan, you said something about the pre-Cambrian centre...

MR. FEEHAN: No; I said that was one of the important things. I phrased my question badly.

COMMISSIONER THOMPSON: But Pine Point isn't in the pre-Cambrian area.

MR. FEEHAN: Yes; I am afraid I phrased my question badly, and perhaps it was an inappropriate question at this time.

COMMISSIONER THOMPSON: It certainly had me confused.

Thank you, Mr. Feehan.

THE CHAIRMAN: Have you got any more questions, Mr. Feehan?

MR. FEEHAN: No. Thank you very much.





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THE CHAIRMAN: We will be grateful, Mr. Edworthy, if you will give us that other information.

MR. EDWORTHY: With Mr. Brownlee's help I will be happy to do that.





SUBMISSION OF  
ROYALITE OIL COMPANY LIMITED

Appearances

Mr. Hay

President

Mr. G. A. Connell

Manager, Engineering  
and Economics

Mr. A. F. D. Short

THE CHAIRMAN: Mr. Connell, are you going to present the brief?

MR. CONNELL: Yes, Mr. Chairman; and I have Mr. Hay and Mr. Short with me.

THE CHAIRMAN: Yes.

MR. CONNELL: Do you wish me to proceed now?

THE CHAIRMAN: All right, Mr. Connell. If you wish to elaborate on anything as you go along you are free to do so.

MR. CONNELL: Very well.

The success of an industry in the area north of McMurray, together with the community it supports, depends to a large extent on a transportation system which will provide uninterrupted access.

The improvement of transportation conditions to the area between McMurray and Fort Smith will influence the exploitation of resources. The development of some of these resources, such as the Athabasca





Oil Sands, pulp, timber and minerals, might well be economically feasible if adequate year-round transportation facilities become available.

At the present time incoming shipments, other than by air, have to be offloaded from the NAR railhead at Waterways. During the period from early May to early in October freight is moved down-river by barge. A winter road along the river is used during the months of January, February and March. For the months of April (that is during the break-up), November and December (that is during freeze-up) air freight is the only reliable means of transportation.

Royalite Oil Company Limited, in partnership with Cities Service Research and Development Company, is investigating the economics of the commercial utilization of the Athabasca Oil Sands. A semi-commercial pilot plant has been built on a special plant site lease. This lease covers all or a portion of Lsd. 9, 16 of Section 34 and Lsd. 5, 6, 12, 13 of Section 35 in Township 92, Range 10, West of the 4th Meridian and Lsd. 4, 5 of Section 2 and Lsd. 1, 8 of Section 3 in Township 93, Range 10, West of the 4th Meridian. The partnership holds Bituminous Sands Lease Number 17, which contains 49,788.2 acres. The attached map shows the location of Lease 17 and the plant site lease.

If you care to refer to the map at the back of the submission you will note that the Bituminous Sands Lease and the special plant site lease are located approx-





imately 25 miles north of the town of McMurray and Waterways which is the end of the rail.

Operation of the semi-commercial plant plus additional research laboratory work will enable Royalite and Cities Service to predict the results of a commercial project.

The transportation requirements for commercial operations, as presently contemplated, are estimated as follows

1. Initial Construction

Commercial Plant	50,000 to 100,000 tons
Townsite	25,000 to 40,000 tons
Pipe line	<u>20,000 to 30,000 tons</u>
Total	95,000 to 170,000 tons

2 Yearly Maintenance

Plant	1,000 to 2,000 tons
Townsite	<u>15,000 to 25,000 tons</u>
Total	16,000 to 27,000 tons

The "pipeline" referred to under the heading "Initial construction" is the total tonnage that will be involved in running a line from the Mildred Lake area down to Edmonton. If we consider only the pipeline north of McMurray that would be approximately 10 per cent of those figures. But a large portion of the pipe for that line would probably be moved in by rail and would mean tonnage for the railways, although not necessarily on the proposed line. It would only be about 10 per cent of that pipeline that would be on the new line if it existed on the eastern route.





Therefore, that area represents tonnage in the order of 16,000 to 27,000 tons. Of course, that will vary with the size of plant that is installed, and the townsite will also be a function of the number of employees, which in turn, is the function of the size of the plant installed.

### 3. Outward Shipments

Outward shipments of products such as fuel oil, diesel fuel, asphalts, road oils, sulphur, coke, glass sand, etc., will be made both north and south.

The present market for heavy fuels for the uranium mining companies is approximately 6,600,000 gallons or 32,000 tons per year. Potential markets including the Pine Point development and expansion of Eldorado Mining and Refining Limited at Beaverlodge would approximately equal this tonnage.

There is a large potential market for asphalt in the northern highway program...

THE CHAIRMAN: Would you mind going back to the previous paragraph? I am not sure that I understand something there. You say: "The present market for heavy fuels for the uranium mining companies is approximately 6,600,000 gallons or 32,000 tons per year..."

MR. CONNELL: That is correct.

THE CHAIRMAN: Then you say: "Potential markets including the Pine Point development and expansion..."

MR. CONNELL: That includes the Pine Point





development and also possible expansion of the Eldorado Mining and Refining Limited.

THE CHAIRMAN: What is this expansion of Eldorado?

MR. CONNELL: That was one that was considered at one time at Beaverlodge. With the present uranium situation it is quite possible that that will be undertaken.

I think this was obtained two years ago, or a year ago. That was the information at that time.

Pine Point, in itself, we have used approximately 15,000 tons, and that will be dependent on whether they generate their own power or obtain power from another source. My information is that if they didn't generate their own power it would probably be in the order of 5,000 tons per year rather than 15,000 tons.

In many areas asphalt base courses will be economic due to the relatively poor gravel supply. The 1,000 mile program presently planned provides a potential market of 180,000 tons of asphalt for base courses. If the surface is paved an additional 120,000 tons of asphalt will be required.





Market for other petroleum products including motor gasoline, diesel fuel, aviation gasoline and heating oil are approximately 7,000,000 gallons or 28,000 tons per year.

With the development of the northern area, the market for all of these products will increase substantially. The present market is served by water transportation but this represents potential freight for a railway via the Waterways route.

It is estimated that there is a market for 50,000 tons per year of high grade silica sand from this area for glass manufacture in the Fort Saskatchewan and Medicine Hat plants.

A total of 27,000 long tons of sulphur was shipped to the uranium mines via Waterways this year.

#### 4. Transportation of Personnel

Commercial operations would require 300 to 400 operating and maintenance personnel. The town population is estimated to be 1,500 to 2,000.

#### 5. General

Existing transportation facilities do not provide dependable year-round service and handicap the development of this vast natural resource.

I believe you are all familiar with the estimates that have been made for the oil that might be recovered from the oil sands. These vary anywhere from 100 billion to 300 billion barrels of oil, and when we consider the present crude oil reserves of





Western Canada at about 3.6 billion, you realize that this represents anywhere from almost 30 to 100 times the presently proved reserves in Western Canada.

THE CHAIRMAN: Do you mind looking at page 3, Mr. Connell, dealing with outward shipments? You speak of the markets which are available in the north for petroleum products. In a general word, that covers that page, does it not?

MR. CONNELL: Yes.

THE CHAIRMAN: Now, are those markets not available for petroleum products no matter which way the railroad goes?

MR. CONNELL: These are the present markets, and the market is presently served by water transportation, but it could be a potential market for a railway via the eastern route.

THE CHAIRMAN: But a great portion appeared to go up from Grimshaw north; some go in by water.

MR. CONNELL: These are products which move through Waterways.

THE CHAIRMAN: You are dealing on page 3 only with the products which go through Waterways?

MR. CONNELL: Yes, but potential markets could go either way, depending on which way the railroad is routed, and it may be out of the oil sands area.

THE CHAIRMAN: I am not sure of the position this has on the relative merits of a railway one way or another.





MR. CONNELL: We felt that this information would indicate -- we are not sure what the price of the products would be; they may be more attractive than the present price of products and therefore might develop the area. The fact that a plant might go in there certainly would contribute to the better economics of a railway via this route, so I think there is a mutual benefit to be obtained both for a plant going in and for the railway if it went via this route.

THE CHAIRMAN: I am sorry, I don't follow that.

MR. CONNELL: Well, I am just pointing out these potential markets, potential freight for a railway which might go up via this route.

THE CHAIRMAN: Take the Pine Point development. Certainly a lot of fuel is going to be used there.

MR. CONNELL: That is correct.

THE CHAIRMAN: Now, would it be better if it should go from Waterways north than if it were to go from Grimshaw? I see Mr. Grindle is interested in that question. Perhaps you would like to talk to him for a minute or two and compare notes on it. Perhaps we will have a two or three minute adjournment while the three of you discuss it.

MR. HAY: It isn't necessary. Two or three years ago we talked to the Pine Point people and they indicated that the fuel at the price we expected to be able to produce it with available transportation from our plant to Pine Point would materially





affect their cost of generating power and their approach to developing their project. They talked to us on the basis of supplying fuel out of the oil sands project rather than the price they had to pay for bringing it in from a greater distance.

THE CHAIRMAN: That is comparing the price they would pay for the fuel they would buy from you?

MR. HAY: Yes, provided it was transported by railroad. The question came up this way, whether or not we would build a large enough generating plant at Mildred Lake, put in electricity from Mildred Lake to Pine Point, or transport the fuel from Mildred Lake and generate at Pine Point, and if there was year-round transportation it might influence the building of the power plant at Pine Point.

THE CHAIRMAN: That means developing the power at Pine Point from fuel they buy from you, rather than using hydro power that might be developed at Fort Smith?

MR. HAY: That is right; that was the engineering question they were asking.

THE CHAIRMAN: And this was in consultation with Consolidated Mining & Smelting?

MR. HAY: Yes.

THE CHAIRMAN: Did they consider the question of developing power and gas from northern British Columbia?

MR. HAY: I don't think they did.

THE CHAIRMAN: There has since been some





interesting discoveries of gas in there?

MR. HAY: Yes.

THE CHAIRMAN: Can you give us any comparison between the cost of your product and the cost of gas from northern British Columbia?

MR. HAY: Well, in general, the general approach is that fuel oil for the generation of electricity is cheaper for generating electricity than gas. I can't speak of the economics if you happen to have a gas supply right at your plant.

THE CHAIRMAN: Have you estimated the cost of taking your fuel from Mildred Lake to Pine Point?

MR. HAY: No, we haven't done that.

THE CHAIRMAN: You haven't calculated that?

MR. HAY: No.

THE CHAIRMAN: You are assuming it would be a cost which would make the power cheaper than if it were generated at Fort Smith?

MR. HAY: As I recall, we felt that we could produce fuel at a price which would be attractive to a study which would consider thermo-generation versus hydro-generation. My recollection is that the price we talked about was the price we could supply fuel at competitively with hydro power.

THE CHAIRMAN: But you didn't get into any figures concerning the freight rates of fuel?

MR. HAY: No.

COMMISSIONER GAINER: Am I right in assuming





that at the time your studies were made you assumed the cost of transmission was going to be at Mildred Lake to Pine Point?

MR. HAY: That was a suggestion.

COMMISSIONER GAINER: And you have never since looked at the picture from the point of view of railing in your fuel and constructing a power generating plant north of Pine Point?

MR. HAY: Well, the question came up rather from the other direction. We had to consider a power plant at Mildred Lake, and in that plant we considered the possibility of making coke. Coke would not readily be, at that time, transportable to Pine Point. So the question then came: What do you say if you could bring in a power plant there and we could make a low-cost fuel? That was one consideration. Then the Consolidated people came and said: "We have to have power at Pine Point and we would have to have so many barrels a day and what kind would you have?" We felt we would have the lower-priced product than they could get from bringing it in from a further distance, and the two schemes have not been resolved because we have not resolved whether we would have coke or not and what type of power plant we want.

COMMISSIONER GAINER: In the last group of estimates -- Consolidated discussion -- when the question was asked what you could get fuel in there for, what transportation assumptions did you make?





MR. HAY: We didn't presume to use rail transportation; we would use barges.

THE CHAIRMAN: You based your calculations on using water?

MR. HAY: Yes. We haven't resolved whether it would be economic to do it because we haven't studied it in the last year and a half; but rail transportation would certainly have an advantage over water transportation because of the steady flow of fuel to the power plant.

THE CHAIRMAN: I suppose it is more expensive. You just haven't considered what the freight charges might be?

MR. HAY: No, we haven't their charges to work with.

COMMISSIONER THOMPSON: Wouldn't it always be cheaper to manufacture power at the source of your power?

MR. HAY: I am only saying that two different people put two different proposals to us, neither one of which have been resolved.

COMMISSIONER THOMPSON: But if you had the fuel at a certain site, it would look to me that you could manufacture power and transmit power cheaper than you could transmit the fuel. If you had the fuel at Mildred Lake and the power was needed at Pine Point, which is the cheaper?

MR. HAY: That was not resolved, but we were left with the impression that transporting the amount of power that was required over the distance and the





terrain that was involved left some doubt. So I don't believe there is an answer to that available right now.

COMMISSIONER GAINER: Of course, it is possible that a compromise might be reached. The Portage Company transmit there. The plant could be anywhere between the two points.

MR. HAY: We start getting into trouble when we start storing fuel for more than three months, because of the storage tanks you have to build, as against uninterrupted flow of fuel. It costs money to build storage tanks; you can't start a seasonal inventory from November to carry you through to next May.

COMMISSIONER GAINER: Then from your general experience in marketing products would it not be your impression that it is very likely it would be cheaper to move bulk products by water?

MR. HAY: Generally speaking, you certainly use water transportation rather than by rail.

COMMISSIONER GAINER: But it is the interruption factor?

MR. HAY: Yes.

COMMISSIONER GAINER: And it doesn't store well?

MR. HAY: Yes. It has got to be heated in the winter time. It offsets to some extent the difference in transportation.

THE CHAIRMAN: It is a year and a half ago you considered this with the Pine Point people, Mr. Hay, I take it?





MR. HAY: I know it is at least that long ago.

THE CHAIRMAN: And at that time you were considering the whole thing on the basis of water transportation alone?

MR. HAY: Yes.

THE CHAIRMAN: And it seemed feasible that you might be able to produce fuel and deliver it by water? So that it would be more economic for the Pine Point people than for them to take power from the Fort Smith hydro development?

MR. HAY: It seemed to us that it was a potential market for fuel oil. I would rather say that then it seemed feasible.

THE CHAIRMAN: It would become a market only if it was feasible to get the fuel there than to get hydro from Fort Smith?

MR. HAY: Yes, and the power generating people indicated to us that there was some doubt about the economics of the hydro source in comparison to what we might develop.

THE CHAIRMAN: And now you feel that by taking your fuel up by rail that may be cheaper yet than taking it by water because of the interrupted flow?

MR. HAY: Yes, I think it would be.

THE CHAIRMAN: But you can't give us any idea of the cost of transporting it by rail. The cost might be prohibitive or it might be much cheaper?

MR. HAY: Yes. We have not attempted to arrive





at comparative costs because we don't know what the railways would be.

COMMISSIONER GAINER: It would require heated tank cars in the winter?

MR. HAY: Yes, so that they could be heated for unloading. I am only quoting the inference left with us by the power people that the volume of power and the distance and the terrain might not be too feasible for generating the power at Mildred Lake. We took their word for it.

THE CHAIRMAN: And it wouldn't be worth your while to build a pipe line?

MR. HAY: It seems very unlikely that it would, for the volumes we are talking about, and the product doesn't move readily in pipe line in the winter.

THE CHAIRMAN: In regard to the freight you referred to on page 2 of your brief, it is a substantial amount of freight, but is that of much benefit to a railroad? -- because it would only be going about 25 miles beyond Fort McMurray?

MR. CONNELL: That is right; it is about 25 miles. But it is an additional freight that would be available over and above whatever other freight they might have.

THE CHAIRMAN: Would you mind looking again at page 2? You say the operation of the semi-commercial plant. That is the plant you have there now?

MR. HAY: Yes.





THE CHAIRMAN: "Operation of the semi-commercial plant plus additional research laboratory work will enable Royalite and Cities Service to predict the results of a commercial project." Do you feel that it would be reasonable for me to ask you if you think you have established a commercial project? You would rather not go into that matter?

MR. HAY: We haven't established it, but we would like not to go into it now.

THE CHAIRMAN: Can you estimate how long it would take you to establish a commercial plant? You hope to establish one?

MR. HAY: Yes.

THE CHAIRMAN: Can you give me any idea how long it would take you to do that, with any kind of a range, years or months?

MR. HAY: I think, first of all, with the semi-commercial plant we have to have the experience of having run through a winter season and we will have more complete data after we have run the present pilot plant for another eight or ten months. Following that we will have the analysis we have collected and the engineering and the economic studies which will be made, and I think it would take two years to put all that material together and get it going. I would not like to say that the commercial plant would be ready in two years, but I am sure you will understand it will take about two years to assimilate and design and take the other steps that would be needed.





THE CHAIRMAN: Would it be fair to say you expect that it would take another two years to determine whether you could establish a commercial plant or not?

MR. HAY: No, it would not be fair to say that. Our objective is to determine whether or not we can establish a commercial plant in a shorter time than that.

THE CHAIRMAN: In a shorter time than that?

MR. HAY: Yes.

THE CHAIRMAN: Is there any public information as to how much money you have spent there already?

MR. HAY: No, but this is public, the Royalite Company stated in its annual report that it spent almost \$2 million in the oil sands project as at the end of last year.

THE CHAIRMAN: That is just experimental work?

MR. HAY: Yes -- I think the correct figure is \$1,900,000.

THE CHAIRMAN: In round figures it is \$2 million?

MR. HAY: Yes, in round figures, \$2 million. This is from our annual report of December 31, 1958: "Present investment of \$1,928,225."

THE CHAIRMAN: And the commercial plant would, of course, cost considerably more?

MR. HAY: Yes. Well, the pilot plant has been built since the end of 1958. The pilot plant at Lake Mildred has been built since 1958.





THE CHAIRMAN: The pilot plant is in addition to that \$2 million?

MR. HAY: Yes, except for work we did in core hole work and the pilot plant work at Mildred Lake is in addition to this amount.

THE CHAIRMAN: There is no ferry across the Athabasca River now, is there?

MR. HAY: No, I do not think so.

THE CHAIRMAN: Is one planned by your company or by the provincial government if no railroad is built?

MR. HAY: I have no knowledge of one.

THE CHAIRMAN: I suppose a ferry from Fort McMurray across the Athabasca would help you service your plant if no bridge is built?

MR. CONNELL: Of course, that would only be available during the summer months. There is barge service during the summer months and a ferry could only operate at the same times.

THE CHAIRMAN: Yes, in the winter time ---

MR. CONNELL: Well, after freeze-up you cross the ice on the river and go up the river road.

THE CHAIRMAN: But you lose considerable time.

MR. CONNELL: That is right. You lose at least three months out of the year, the break-up in April and the freeze-up in November and December.

THE CHAIRMAN: On page 4 you estimated a





market for 50,000 tons per year of high grade silica sand at Fort Saskatchewan and Medicine Hat. Can you tell me how that is made up, how much to each of those?

MR. CONNELL: We do not have a breakdown of that. We got that from Mr. Grimble and I believe he is ---

THE CHAIRMAN: Perhaps Mr. Grimble would tell me how he arrived at that figure?

MR. GRIMBLE: We have that at the office, but I did not expect to be asked here.

THE CHAIRMAN: Mr. Grimble, I once had an interest in silica sand and the most I could get was 26,000 tons a year.

MR. GRIMBLE: It might depend on how the market was or whether you included ---

THE CHAIRMAN: I was just considering Fort Saskatchewan and Medicine Hat, but you include the other markets -- what the oil industry would use and what might be used in British Columbia?

MR. GRIMBLE: And Saskatchewan.

THE CHAIRMAN: Have you established that the sand is satisfactory for glass?

MR. GRIMBLE: It has not been established except 20 per cent of the sand is in the gradation size for glass making.

THE CHAIRMAN: Twenty per cent?

MR. GRIMBLE: We have not too many samples to judge by and we might have picked on a particularly





fine analysis but the ones we have studied are suitable for glass.

THE CHAIRMAN: And the quality is satisfactory, is it?

MR. GRIMBLE: It has not been advanced to the state where we have actually run a test. This will depend on the results of the segregation process.

THE CHAIRMAN: Have you any analyses of it?

MR. CONNELL: We have some analysis. We supplied this to Mr. Grimble and we have other reports for analysis. In addition to the Fort Saskatchewan, Medicine Hat plants we have been approached by people who are interested in glass wool and glass for insulators who are not too concerned about the purity of the sand. That is another potential market. We do not have an estimate of just how much but I think you might say that there may be numerous other by-products that might develop out of this operation.

THE CHAIRMAN: Well, for glass, silica sand has to have a certain proportion of silica, a high enough proportion of silica and low enough proportion of impurities, does it not?

MR. CONNELL: I am sure that is correct.

THE CHAIRMAN: How high does yours rate?

MR. CONNELL: Somewhere around 95 per cent.

THE CHAIRMAN: Is it 95 per cent? I thought it was higher than that.

MR. CONNELL: I have here a report by D. A.





Hows on silica, and according to this sample it is 95.9 per cent.

THE CHAIRMAN: Whose report?

MR. CONNELL: D. A. Hows. This is his report:

SiO <sub>2</sub>	95.50
Al <sub>2</sub> O <sub>3</sub>	2.25
CAO	0.50
FE <sub>2</sub> O <sub>3</sub>	0.35
Mgo	0.23
Loss in ignition	<u>1.50</u>
	100.33

THE CHAIRMAN: What are you reading from? Is this a report you received?

MR. CONNELL: A report that has come into our hands. I think it is a critical analysis of work that has been done to date in the oil sands.

THE CHAIRMAN: Would you mind preparing that excerpt and let us have it as an exhibit?

MR. CONNELL: Yes, you are interested in that portion of it?

THE CHAIRMAN: I am just interested in the fact that there are 50,000 tons of high grade silica available and I was wondering to what extent you have established it as glass sand.

MR. CONNELL: Yes.

THE CHAIRMAN: Is this your own sand that has been analysed?

MR. CONNELL: No, it is not. This is a report that was made prior to the time that we became involved in the oil sands.





THE CHAIRMAN: Have you had any of your own sands analysed?

MR. HAY: Not that I know of.

THE CHAIRMAN: I think perhaps we will have a very short adjournment now.

---Short recess.





THE CHAIRMAN: Gentlemen, I think you are going to have Mr. Grimble elaborate on some of the questions you have been asking.

MR. GRIMBLE: I think there was one point you raised which I didn't think was covered too thoroughly and that was the question of how the tar sands proposition was going to contribute towards the railway in this location. The answer appears to be that if they do use oil to develop Pine Point -- to develop power at Pine Point -- then, of course, if the commercial process is a success they will be producing oil competitively with oil in Edmonton or they wouldn't go ahead; consequently, the oil would definitely be cheaper at Pine Point from the tar sand project because it is closer.

The second point you raised was how will this 20-mile extension contribute to the railway's revenue? The production that is hauled over it has come many miles, and if good access means the success or failure of the project, then the success of the project will involve a lot of revenue by virtue of long hauls at least from Eastern Canada and other sources. The 20-mile haul to the railway is small, but the additional revenue from additional long-haul freight will be significant.

MR. FOUKS: I didn't just understand that, Mr. Chairman. I wonder if Mr. Grimble would expand that last point. I didn't grasp it -- the 20-mile





extension point.

MR. GRIMBLE: As I say, this doesn't mean too much to the railway, because it is only 20 miles of railway haul; and taking the number of tons of traffic and multiplying it by 20 it looks like a small amount of revenue to the railway, but the material that is hauled for 20 miles has probably originated in Eastern Canada, which means a good number of ton-miles and a lot of revenue to the railway.

MR. FOUKS: I may be missing the point, but I don't see how that affects Pine Point. I can see how it might affect Toronto.

MR. GRIMBLE: We had two different suggestions. The one was the effect on Pine Point and the second was the effect of the merits of the tar sands project on the railroad.

MR. BALDWIN: Do you mean the benefits that would accrue to the railroad generally?

MR. GRIMBLE: Yes. One of the suggestions was the benefit that would accrue to the railroad generally and we are dealing now with the second suggestion.

THE CHAIRMAN: You are answering my suggestion when I was asking you what advantage it was to carry freight just 20 miles from McMurray to the plant?

MR. GRIMBLE: Yes.

THE CHAIRMAN: And you say there is much more advantage than there appears to be?





MR. GRIMBLE: Yes.

THE CHAIRMAN: There is freight haul from Eastern Canada all the way to the plant?

MR. GRIMBLE: Yes.

COMMISSIONER GAINER: Excuse me for a moment. This would all hinge on the premise that the success of the project would involve railroad extension. If it didn't, then this extra freight would accrue to the railroads in any event with the exception of the last twenty miles?

MR. GRIMBLE: The premise on all of this is that the plant is a success; and if the plant is going to be more of a success, or if there is a greater guarantee that the plant will be a success, by having access both to the south and north then this additional revenue is there, and also by virtue of the fact that it has access.

COMMISSIONER THOMPSON: Might I ask you to elaborate on that? You said something about the benefit that would accrue to Pine Point with cheaper oil. You mentioned something about the success of the operation. But the question we are discussing, actually, is the railroad; and supposing you do get cheaper oil at Mildred Lake, then, is it going to make any difference whether you put in the railroad or not? It is still cheaper oil?

MR. GRIMBLE: The point I was trying to bring out there was that I assumed Pine Point was a





marginal operation on the world market and I assumed it needed the benefit of cheaper fuel. Then, if the tar sands is a commercial proposition and can offer cheaper fuel that will contribute to the development of Pine Point. Cheaper fuel at Pine Point will help the development of Pine Point -- the development of that area.

COMMISSIONER THOMPSON: Wouldn't it give you cheaper fuel at a plant further down the river? It would still be cheaper?

MR. GRIMBLE: This is a matter of the economics of tar sands operation.

COMMISSIONER THOMPSON: But what I can't figure out is -- I can see that if the operations are a success certainly you would get much cheaper oil at Pine Point, which would be a good thing. But, I mean, how does it tie up to whether or not we build a railroad on the east or the west?

MR. GRIMBLE: What it really amounts to is that if this is a successful operation the oil from the tar sands at Pine Point will be cheaper than oil from any other source.

COMMISSIONER THOMPSON: I agree with you; but where does the railroad come in -- whether it is built on the east or the west?

MR. GRIMBLE: Without the railroad it wouldn't be.

COMMISSIONER GAINER: That is the critical part, I take it, and on what you base this statement now?





MR. GRIMBLE: The alternatives are water transport with a portage, with transshipment somewhere else along the line, plus the problems of winter storage and tanks, etc. Even without figures it is obvious that railway transportation is the cheapest.

COMMISSIONER GAINER: You haven't reduced your thinking to tonnage, or dollars and cents estimates on railing the oil in, for instance?

MR. GRIMBLE. There is suggested tankage on the water route from Waterways to, for example, Fort Resolution. That would be something to compare it with.

COMMISSIONER GAINER: But you feel confident that you could ship in by rail tank car more profitably than that?

MR. GRIMBLE: Yes, I am confident; because oil doesn't move over the portage now; in other words, Bell Rock doesn't get oil from Waterways.

COMMISSIONER GAINER: Although Northern Transportation does operate tank barges into the lake?

MR. GRIMBLE: Yes. I think the portage is big enough for the movement of oil. Actually, Hay River handles a lot of oil. Tankers now carry via the highway a lot of oil to Hay River in contrast to what is going over the portage. Figures are available on that. I am confident that the railway movement would be much cheaper to Pine Point with, consequently, a saving in cost.

THE CHAIRMAN: May I ask you how it would





happen that oil would move up more readily by rail than by the water route in view of the fact that oil doesn't move over the portage now but Bell Rock gets its oil up the Grimshaw route and then by barge and across the lake and up the river?

MR. GRIMBLE: It does now. Mr. Porritt said that yesterday morning. He said some oil now moves to Bell Rock through Hay River by truck.

THE CHAIRMAN: Some oil moves through . . .

MR. GRIMBLE: . . . through Hay River -- by truck to Hay River.

THE CHAIRMAN: There has been evidence here that quite a lot of oil goes up the water route, and Mr. Hay has told us he discussed the situation with the Pine Point people and they discussed it on the basis of oil going up along that route.

MR. GRIMBLE: I don't think it moves now across the portage. I can confirm that; but I am quite confident of what I say.

THE CHAIRMAN: Don't you feel that we should have something more definite than has been given to us now before we can make an intelligent report on it? Mr. Hay hasn't even a figure of any kind -- not even an estimate -- as to what the freight charges might be on this fuel going from Waterways to Pine Point.

MR. GRIMBLE: We have an estimate in our office.

THE CHAIRMAN: You are confident, and you





point to something that Mr. Porritt said yesterday?

MR. GRIMBLE: He just illustrated it.

THE CHAIRMAN: You said cheaper fuel at Pine Point will help Pine Point. There is no doubt about that; but if a railroad were to be built will fuel be laid down at Pine Point to provide power that would be cheaper than other power that they might obtain? You say there is electric power that has been suggested from Fort Smith and that there is gas that has been suggested from Northern British Columbia.

MR. GRIMBLE: We prefaced that with the fact that it is proposed now to use fuel oil to generate the power. The purpose is to use fuel oil.

THE CHAIRMAN: That is a definite proposal?

MR. GRIMBLE: At this date, they are now investigating the power development at Fort Smith, but the government could change their attitude. At this stage they propose to use oil.





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Grimble

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MR. FQUKS: Mr. Chairman, I wonder if I may be excused. Is that at this stage or a year and a half ago it was discussed?

MR. GRIMBLE: This summer.

THE CHAIRMAN: Is it that they are going to use fuel oil as their permanent source of power?

MR. GRIMBLE: It was supposed at the date I talked to them that they would use fuel oil. However, there is a change in the power development, and this could change their thinking.

THE CHAIRMAN: But it is their intention now to use fuel oil and it is for their permanent operation?

MR. GRIMBLE: Yes, that is at this time.

THE CHAIRMAN: And the cheap fuel oil you feel would come from Mildred Lake?

MR. GRIMBLE: Yes.

THE CHAIRMAN: How would you compare that with fuel oil that might be available from the refineries in northern British Columbia?

MR. GRIMBLE: Which part of British Columbia?

THE CHAIRMAN: Dawson Creek and Grand Prairie.

MR. GRIMBLE: Well, again the railway haul would be considerably less in terms of distance.

THE CHAIRMAN: It would be shorter, wouldn't it?

MR. GRIMBLE: It would be considerably shorter.





I was going to say half the distance.

MR. BALDWIN: 150 miles shorter?

THE CHAIRMAN: You suggested this -- at least I think you put this in the form of a question: If this plant at Mildred Lake was a success. Now, are you suggesting that the building of a railroad is more likely to make it a success?

MR. GRIMBLE: Yes, I am suggesting that.

THE CHAIRMAN: Why would the building of a railroad make it a success?

MR. GRIMBLE: Probably I am speaking out of turn -- Mr. Hay should be answering this -- but it would seem if it could move north and if the cost and interrupted movement and trans-shipment could be avoided, it would be a success.

MR. HAY: I don't know whether it is known now whether the plant would be built with or without a railroad; I don't think anybody could say that. But I believe the situation could arise where a service of a railroad to Mildred Lake could very materially affect the decision to go ahead with the commercial project. It would very much balance the decision in favour of a commercial project.

THE CHAIRMAN: Would you mind enumerating the advantages of a railroad? One is that it would enable you to get a market at Pine Point.

MR. HAY: Yes. It would help the town site which we envisage there. If it was built we would have





1,500 or 2,000 people. The need to get across the river is one of our major problems, and it is always so much more attractive and easier to develop a project we are interested in if it is served by rail haul.

THE CHAIRMAN: So you feel it would be of great convenience to the people who would live in that community which you anticipate would be built around your plant?

MR. HAY: Yes.

THE CHAIRMAN: Would you put that as one of the main reasons why the railway would assist you?

MR. HAY: Well, one of our main problems in an area of that kind is people and the ability to create for people a pleasant place to live, and the services that you can get from a railroad is an attraction to us for keeping people there and contented to work for us.

THE CHAIRMAN: We are getting into difficulties here, Mr. Hay. You say provide convenience for how many people?

MR. HAY: We think we will have about 1,500 people in the townsite.

THE CHAIRMAN: We are thinking of the convenience for some 1,500 people in your proposed townsite who will, in any event, be within 20 miles of a railway, whereas the gentlemen who are advocating a route the other way are talking about several thousand people who are upwards of 100 miles from a railway and who have been asking for those conveniences for a number of years.





MR. HAY: I am only speaking of the convenience in relation to maintaining an adequate staff to maintain the operations.

THE CHAIRMAN: Certainly it is one of the merits of a railway along the east route which would be of assistance to you in providing for convenience to those people.

MR. HAY: Yes.

THE CHAIRMAN: I am pointing out to you the problems that must arise to us as to the convenience for the people who are already established. That is for people who are prospective inhabitants of a community who are only 20 miles from a railway.

MR. HAY: But they are without any means of getting anywhere with the barrier of the river.

THE CHAIRMAN: You are relying on the bridge. One of the reasons you would like the railway bridge, I take it, is because the Dominion Government would build a bridge across the Athabasca River which your people would cross.

MR. HAY: Yes. Early in this project we looked at the possibility of building a railroad ourselves. We could see where we could build a railway for our project, but we couldn't see where we could build a bridge, so without the bridge the railroad is no use.

THE CHAIRMAN: Do you know how much a bridge would cost?





MR. HAY: \$2,200,000 I am informed is our estimate for the bridge. This was in November or December, 1957.

THE CHAIRMAN: That is two years ago?

MR. HAY: Yes.

THE CHAIRMAN: What would the cost of the railway be?

MR. HAY: \$2,270,000.

THE CHAIRMAN: Almost the same thing.

MR. HAY: Yes.

THE CHAIRMAN: You might build one or the other, but you can't build both.

MR. HAY: That is right.

MR. FOUKS: How many miles is that, may I ask?

MR. HAY: 25 miles.

THE CHAIRMAN: I was asking you, Mr. Hay, what the advantages of the railway might be in helping you establish your plant as a commercial plant, and you mentioned the fact that it would be a more pleasant place for people to live and you might be able to build your staff more readily, and you have access across the river for those people and your townsite is serviced.

MR. HAY: Yes.

THE CHAIRMAN: You would think you would get a possible chance of a market at Pine Point for your fuel?

MR. HAY: Yes, I think that is right.





THE CHAIRMAN: Is that a substantial part of the proposed market?

MR. HAY: No, it is not necessarily, but it might be contributing as an important haul to the railroad. But it is not essential to our project.

THE CHAIRMAN: It doesn't make any difference whether yours is going to be a success or not.

MR. HAY: No. I wouldn't like to say about the total business in the north, but I don't think it would affect our decision.

THE CHAIRMAN: Do you think the total business in the north would be affected?

MR. AHY: If we could reach the sulphur market in the north we might put in additional equipment to manufacture sulphur.

THE CHAIRMAN: Is there sulphur in your product?

MR. HAY: Sulphur could be removed from our product.

THE CHAIRMAN: Is it expensive to take it out?

MR. HAY: I don't know yet. It is relatively not expensive. The information we have developed so far on sulphur is that if there were a market for sulphur we would probably put in equipment to manufacture it.

THE CHAIRMAN: Can you give me any idea how much more expensive that might be?





MR. CONNELL: It really depends on the plant. We have a plant with 30 tons a day which costs us \$4,000 to \$8,000. Well, 30 tons a day is approximately 10,000 a year, so to supply this amount would take 85 or 90 tons a day, so that might be a million and a half dollars expenditure, for the sulphur plant alone.

THE CHAIRMAN: Is there any other reason why the commercial plant would be a success?





MR. HAY: When we talk about building the plant we talk about equipment that would be very difficult to move into this site on anything but a railway. It is going to add to our problems greatly if we have to move in such things as 60 or 80-foot towers, bring them into McMurray and get them into a barge and haul them in in the winter time. If a railway were there we could run them into the site. That is something that has given us some concern and it adds to the cost of our project.

THE CHAIRMAN: It is not a vital problem, I presume, because when you planned your plant originally there was no thought of a railway or did you have that in mind?

MR. HAY: Except we prepared an estimate for a railroad.

THE CHAIRMAN: Did you?

MR. HAY: Yes, that is where the estimate comes from. We had to decide whether we could afford to build our own railroad or not which would reduce the capital cost invested in the plant. We could build the railroad, I think, but not the bridge.

THE CHAIRMAN: But you went ahead in spite of that with your plans?

MR. HAY: With the research part of it, yes we did.

THE CHAIRMAN: When you did that did you do it on the assumption that a railroad would be built there?





MR. HAY: No, no we did not.

THE CHAIRMAN: It is not vital to your project but it would be very convenient.

MR. HAY: We could not assume a railroad would be built in our figures.

THE CHAIRMAN: It would be fair to say this then: The railroad would appear to be a matter of convenience and it might tip the scales?

MR. HAY: Yes. I do not want to use the word "convenience", we do not want to build railroads for convenience but the railroad could tip the scales as to whether the plant could be commercial or not.

COMMISSIONER GAINER: The only question I have was really an extension of those that have been going on. This might be unfair in a sense to ask for a further evaluation of what affect the railroad would have on your products as you see them, but it strikes me that in the case of asphalt, for instance, your product could move by barge even over the portage and you would only have the summer market in any event. That is just an example. I am wondering with sulphur if you are able to capture the Lake Athabasca market, the sulphur moves in by barge. Now, it is true it would be a convenience to that area and a cost reducing convenience so you do not have to store sulphur if you had all water transportation but it would still mean a haul in by the railroad to Uranium City. In general I am wondering with the exception of the bridge that





might move to Pine Point just how fully a railroad would meet the needs of the customers, let us say in the Lake Athabasca area for highway or asphalt construction in the far north. Is it not likely that many of these needs may be met by water transportation, or do you feel that the matter of year round transportation, for instance, even though it may not be the cheapest, might tip the scales in all these cases or most of them?

MR. HAY: I would be inclined to say that a year round service for many of the products that you have mentioned by rail out of Mildred Lake would open up new markets for the Mildred Lake project and consequently would improve the feasibility of it. One in particular I am doubtful if we could -- I won't say it that way but I would say the cost would be very heavy on moving asphalt by other than rail because asphalt is a very heavy product. You have to put it on the barges to get it over the portages or if you put it in bulk you would have to have heating facilities each time you loaded or unloaded.

COMMISSIONER GAINER: I am wondering if you would not have to do that anyway in most locations.

MR. HAY: In tank cars it is not a difficult problem to handle asphalt, but handling it through the portages and as many times as we would have to to move it into the market, I think it would prohibit -- well, we would try to meet the market regardless of transportation but it would all back down to higher transporta-





ion costs.

COMMISSIONER GAINER: That is right. The only thing I was concerned about was even though you do move your asphalt by rail it could only go to Pine Point or somewhere in between and you would have to trans-ship it to almost any other place by barge.

MR. HAY: Yes, but you could afford to build a terminal to handle it at the railhead that you otherwise might not be able to build.

COMMISSIONER GAINER: And you think that most of the products mentioned on page 3 -- sand, of course would move south in any event -- fuel oil, diesel oil and so on, would you expect -- would your operation expect to be interested in the market for most of these products?

MR. HAY: Yes, we plan to design a commercial operation that it will be competitive in the market for these products in the area north and south, which ever area we can reach. That is the diesel fuel and fuel oils, heavier fuel oils, bunker fuels, heavier asphalt. I have purposely left out gasoline because we are not able to say that about gasoline at this point.

THE CHAIRMAN: Mr. Feehan, have you any questions?

MR. FEEHAN: Mr. Hay, Mr. Fouks has asked me to ask this question: Since we are more or less in the realm of speculation regarding the sands, in the event that a heavy gravity oil find was made in the





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Grimble

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Great Slave area or a gas find, would that not completely obliterate the Pine Point market for you?

MR. HAY: It could.

MR. FEEHAN: That is all.

THE CHAIRMAN: I think you are all through, gentlemen, thank you very much. We will adjourn now until 10 o'clock tomorrow morning.

---- Adjournment until 10.00 a.m. Thursday.



ROYAL COMMISSION  
ON  
GREAT SLAVE LAKE RAILWAY

HEARINGS

HELD AT  
EDMONTON, ALBERTA

VOLUME No.: 7

DATE:

SEPT. 17/54

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ROYAL COMMISSION ON  
THE GREAT SLAVE LAKE RAILWAY

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Hearings of the Royal Commission on  
the Great Slave Lake Railway held  
at Edmonton, Alberta, at the Court  
House, at 10.00 a.m., September 17,  
1959

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PRESENT:

MR. M. E. MANNING	Chairman
MR. WALTER D. GAINER	Member
MR. JOHN ANDERSON-THOMPSON	Member

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MR. FRANCIS M. FEEHAN	Counsel
MR. A. PATERSON	Secretary

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SUBMISSION OF  
BRITISH COLUMBIA AND YUKON  
CHAMBER OF MINES

Appearances:

Dr. Christopher Riley

THE CHAIRMAN: Dr. Riley, you are presenting the brief for the British Columbia and the Yukon Chamber of Mines, are you not?

MR. RILEY: Yes, sir.

THE CHAIRMAN: And I think we would like to put on the record a little of your experience. You are a Doctor of Philosophy and Geology?

MR. RILEY: Yes.

THE CHAIRMAN: And a consultant geologist?

MR. RILEY: Yes, in Vancouver.

THE CHAIRMAN: And you have practised your profession in Western Canada for how long?

MR. RILEY: Well, western and eastern Canada and other parts of the world -- I guess thirty or thirty-five years; something like that.

THE CHAIRMAN: Have you had much experience in the Northwest Territories?

MR. RILEY: Well, I went to the Northwest Territories first in 1932, the Great Bear Lake. I was there until 1934. Then we moved -- there was a gold





rush happened at the Lake Athabasca region, at Beaver Lodge Lake and Goldhills, and we moved our centre of activities there and we worked out from Lake Athabasca and down to the Great Slave Lake area and worked in that country till 1939.

THE CHAIRMAN: Seven years?

MR. RILEY: Yes, the summer, and then I was sent to Toronto to open an exploration office for a mining company and worked out of Toronto and various parts of Northern Canada, Quebec, Ontario, Manitoba and the Northwest Territories, until 1946, when I went to Vancouver, and then I worked out of Vancouver.

THE CHAIRMAN: Dr. Riley, would you like to read the brief from there or would you like to come up to the witness box?

MR. RILEY: Maybe you could hear me better from here.

THE CHAIRMAN: Yes, and if you wish to elaborate on your brief as you go along, by all means do that.

MR. RILEY: In presenting this brief, I first wish to explain that the British Columbia and Yukon Chamber of Mines is a public organization, registered under the "Societies Act" of British Columbia, and that it has been in existence for a period of forty-seven years. One of our main objectives is to promote the development of mineral resources in Western Canada, particularly in the northern areas. We are keenly interested in





federal and provincial government plans to develop Canada's northland . . .

. . . and, by the way, when I say I am the president this year of the Chamber of Mines, that is why I am here.

. . . and consequently consider matters such as construction of a railroad to Pine Point on the south shore of Great Slave Lake as a matter of utmost importance. As federal government moneys are to be used to construct this railroad, and as we believe this new transportation route to be one of far-reaching significance, not only to the immediate area but to a large portion of Canada's northern interior, we feel the matter of choosing the most advantageous route is one that should receive the utmost consideration by all of us. We are pleased to have this opportunity of expressing our ideas on the proposal, particularly as it will affect mining and allied development.

It is our opinion that a western route from some place in the Peace River area would serve the national interests far more effectively over the years than the eastern route from Waterways to Pine Point. In a discussion of the reasons for this opinion the British Columbia and Yukon Chamber of Mines will confine itself to mineral resources, including oil and gas, and the bearing the western route would have on their development.

It is not our intention to make too much of





oil and gas because we understand it will be discussed later and we don't know too much about that interest.

In so far as a railway has a bearing on oil and gas development, either of the proposed routes will traverse potential oil and gas bearing rocks. However, the western area has a much greater potential because the formations thin out as the Precambrian area is approached. The oil bearing rocks are therefore much thinner in section with resultant diminution of petroliferous potential. In addition, structures become more pronounced westward as the mountains are approached, so that from the point of view of both thickness and structure the western area has the greater potential. Actual drilling results have already shown this to be the case. The bituminous sands of the Athabasca River are already served by a railway in their southern extent.

From the point of view of development of the metallic and non-metallic resources, the western route is the logical one. The chief reason for this lies in the fact that it would appear very likely that before many years have passed a large customs smelter will be required to treat the variety of ores known to occur in that section of Canada. I think that is really the heart of this brief, that particular area we are trying to stress. Such being the case, the Peace River area is the closest and most suitable locality providing the requisite fuels in large and cheap amounts. For example, Grimshaw in the Peace





River area is only 436 miles from Pine Point, much closer to Great Slave Lake than any other suitable location on the eastern route.

THE CHAIRMAN: I didn't understand that sentence in your brief when I read it, Dr. Riley. You say Grimshaw is better than any other suitable location. Location for what?

MR. RILEY: Locations for the production of oil, gas or coal. Edmonton, for instance, has oil, gas and coal, but it is further away. I say that the Peace River area is the closest point to Pine Point in which oil, gas and other fuels of that type could be found.

THE CHAIRMAN: For use at Pine Point?

MR. RILEY: No, at the point at which a custom smelter would be located.

THE CHAIRMAN: You are contemplating a custom smelter at Grimshaw?

MR. RILEY: Somewhere there. We don't know -- the details of that would have to be determined by experts, but somewhere in the Peace River area, and we suggest Grimshaw as a sort of central point, as a point at which a custom smelter would be. But the actual location of it would be something that would require the study and exploration of experts. So our point there is that the closest point at which these fuels are is the Peace River area, from Great Slave Lake and the Pine Point area.





The lowest-cost methods of treating base metal ores are thermal methods, using gas, oil, coke or coal. By far the greater part of the world's lead and zinc ores are refined to the highest degree of purity thus. In view of this, it is altogether likely that eventually, if not at the start, concentrates from Pine Point and other such ores will be treated in this manner.

I think maybe we should pause there for a moment, because that is a radical idea, I think something new. But the fact is this, that it is an economic consideration. The concentrates from base metals can be treated much more cheaply thermally than they can electrically, and therefore we can consider, over a long-term point of view -- as I have just pointed out, those concentrates would be treated thermally from Pine Point and it would be treated in an area where those fuels are available. So we contemplate some time thermal plants will be erected.

Now, you may ask me how I know this. I have discussed this at some length with the electric people at the University of British Columbia, and most of these lead-zinc ores are treated thermally and much more cheaply than they are electrically, and exploration would point to a smelter in that area.

Such a smelting centre located in the Peace River area would not only serve the large lead-zinc deposits of Pine Point but could, as required, be





extended to handle ores from adjoining areas in northern British Columbia, southeastern Yukon and the Northwest Territories. It is a known fact the Alaska Highway has penetrated a tremendous area of high mineral potential. This is a point we had strongly in mind from the point of view of the British Columbia people, that if we had a metallurgical centre the northern parts of British Columbia would become accessible to this centre.

Important discoveries made in recent years have already proved this point. Yet these potentialities cannot be exploited due to the distance from centres of treatment.

To date, a substantial lead-zinc deposit has been developed near Watson Lake on the Alaska Highway and there are other promising occurrences in adjacent portions of British Columbia and the Yukon. These deposits are of a size large enough to warrant mining if they were near enough to a smelter for shipping of concentrates.

THE CHAIRMAN: If a custom smelter were built at Grimshaw, how would the material from Watson Lake get down to it?

MR. RILEY: By truck on the Alaska Highway.

THE CHAIRMAN: How great a distance is it?

MR. RILEY: It would be about 500 miles. I haven't actually measured that distance, but somewhere in the neighbourhood of 500.

THE CHAIRMAN: About 500?





MR. RILEY: Yes.

THE CHAIRMAN: Is it economically feasible to truck concentrates for that great a distance?

MR. RILEY: It would depend on the rates you can get from your trucking people. Generally the trucks go back along the Alaska Highway empty and you should be able to get a favourable rate on it. But I don't think I could stand here and tell you what rates you might get, but it might be economically feasible for that to happen. But you couldn't get very much beyond Watson Lake, I would think.

THE CHAIRMAN: The suggestion, I take it, that has been made with regard to Pine Poine is that it is not feasible to truck the concentrates from Pine Point down to Grimshaw, which is a matter of only 300 miles. Of course, there is an additional railway there, but it is considerably shorter, 300 miles of trucking for concentrates. It seems to me to be implied that it is something which is just out of the question. What do you say to that?

MR. RILEY: I would have to sit down and figure out the value of those concentrates. The concentrates of Pine Point have practically no silver content, but if they have a higher silver content then you can afford to do that, at Watson Lake.

THE CHAIRMAN: Have they a higher content?

MR. RILEY: It depends on what you pay for your trucking.





COMMISSIONER GAINER: What is known about the size of the orebody there?

MR. RILEY: It is known that it is not nearly so large. It is an orebody, I think, around a million and a half developed to date. They didn't develop it fully because of the cost of that development, because they didn't intend to spend a large amount of money in developing large tonnage and still not be able to sell their ore completely. They developed about a million and a half before they stopped drilling.

COMMISSIONER GAINER: It hasn't been delimited?

MR. RILEY: No, not completely. It has been held by the American Smelting and Refining, and these large companies don't publish information regarding their deposits.

COMMISSIONER GAINER: You are talking about thermal matters in smelting. I presume it is thermal that is being used at Trail?

MR. RILEY: No; electroclytic at Trail.

COMMISSIONER GAINER: For lead?

MR. RILEY: Well, thermal for the smelting and electrolytic for the refining. Complete refining of the zinc ores go right through in most parts of the world in the thermal method, the complete ---

COMMISSIONER GAINER: All smelting would use thermal?

MR. RILEY: The larger part of the cost of





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the treatment is in the refining. It is electrolytic  
in the case of Trail.



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MR. RILEY: I might mention here that there are new developments in thermal methods being made at present, and are in contemplation.

Very recently Dr. Forward has perfected a new method of refining zinc ores, and they contemplate that in not too many years there will be still cheaper methods developed. That is not a fact yet.

THE CHAIRMAN: Has this method of Dr. Forward's been worked out other than in laboratories?

MR. RILEY: Well, only his nickel method has been worked out, and is, of course, in operation at Fort Saskatchewan.

THE CHAIRMAN: His method is the one that is used at Fort Saskatchewan?

MR. RILEY: Yes; that is in the case of nickel ores; and he has developed, or is developing in the laboratory, this new zinc treatment which was announced in the Northern Miner, I think, about a month ago; and that has not been put into actual use yet.

THE CHAIRMAN: Does Dr. Forward feel he has perfected it?

MR. RILEY: Yes, he feels he has perfected that one.

THE CHAIRMAN: He has?

MR. RILEY: Yes.

THE CHAIRMAN: That has been perfected, and it is...

MR. RILEY: ...contemplated to use it.





THE CHAIRMAN: You are satisfied that that is a commercial process?

MR. RILEY: Yes; but it is not yet used commercially.

THE CHAIRMAN: But there is no doubt that it is commercially feasible?

MR. RILEY: There seems to be no doubt.

THE CHAIRMAN: And it is a thermal method?

MR. RILEY: Yes, it is a thermal method. I don't know the details of it.

THE CHAIRMAN: But it is a thermal method, is it?

MR. RILEY: Thermal; but I think they use gas. I am not sure about the details of it.

THE CHAIRMAN: It doesn't matter what the source of heat is so long as you get enough heat.

MR. RILEY: Yes; but the handling of gas is so much easier than the handling of coal that you save substantial amounts of money with using gas rather than using coal.

I am not familiar with the details of it, so I don't want to elaborate on it.

Recent copper discoveries south of the Alaska Highway from Mile 400 to 450 have been interesting enough to have had large amounts spent on their exploration. A tungsten deposit near the Yukon border in the Northwest Territories north of, and tributary to, the Alaska Highway was found in the fall of 1958. These dis-





coveries certainly suggest that, although the country is difficult to prospect due to rugged terrain and heavy forest cover, it has good mineral-bearing potential. It is a significant fact that at least 25 of the largest mining exploration companies from various parts of Canada and the United States have been prospecting in these areas during the recent years.

Exploration and development of this vast "mineral empire", including promising areas around Yellowknife and adjoining parts of the Northwest Territories, would be greatly stimulated by the presence of a metallurgical centre in the Peace River area.

Another attractive feature of smelter establishment in the Peace River area is recently announced plans for development of low-cost hydro-electric power on that river. Availability of large quantities of low cost power should do much to encourage investment of capital in the area and bring about establishment of the Peace River as an industrial centre.

That is just a matter of the possibility of a larger development there and making conditions a little more amenable to the population living there.

THE CHAIRMAN: You have now dealt with what, I think, you said was the most important part of your brief, and that is the idea of a custom smelter and metallurgical centre in the Peace River area.

MR. RILEY: That is the essential part -- the most important part -- I would consider.





THE CHAIRMAN: That ends that part of your brief, doesn't it?

MR. RILEY: Yes.

THE CHAIRMAN: Perhaps you wouldn't mind if we asked you a few questions about it. At least, I would like to ask you some questions; I don't know about my colleagues.

MR. RILEY: Yes.

THE CHAIRMAN: Take the last two or three matters you referred to. You referred to the copper discoveries between Miles 400 and 450 on the Alaska Highway. Where is that? Is that near Watson Lake?

MR. RILEY: That is near Toad River and the Racing River. That is about halfway between Port Nelson and Lower Post. It is in the Rocky Mountains.

THE CHAIRMAN: Where is Lower Post?

MR. RILEY: Lower Post is not too far from Watson Lake; a little bit east of Watson Lake. Have you a map there?

THE CHAIRMAN: Yes. It is not quite as far up the Alaska Highway as Watson Lake?

MR. RILEY: No. You mean Lower Post?

THE CHAIRMAN: No -- these discoveries.

MR. RILEY: They are about Mile 400. They are a good deal east of Watson Lake.

THE CHAIRMAN: And Watson Lake is at what mile, do you know?

MR. RILEY: I don't know; I never went beyond





Liard River.

THE CHAIRMAN: Do you know how far this is from Watson Lake?

MR. RILEY: I would say that I would place it about the 600 Mile point.

COMMISSIONER THOMPSON: Where do you start counting your miles from?

MR. RILEY: At Dawson Creek.

THE CHAIRMAN: Watson Lake is about Mile 600?

MR. RILEY: I would guess that, yes.

THE CHAIRMAN: Suppose that developed into an ore body...

MR. RILEY: These copper deposits?

THE CHAIRMAN: Yes; can copper concentrate be hauled by truck?

MR. RILEY: Yes, copper concentrate can be hauled by truck; they are better priced. We have had some studies -- I haven't got them here -- on the cost of hauling copper concentrate to Fort St. John on the PGE to Vancouver and then on down to Tacoma; and if it was a fairly high-grade ore body we could have done it. We could truck it at Fort St. John on the PGE to Vancouver.

We have been making a little economic study of that.

THE CHAIRMAN: And you take it to Tacoma for refining?





MR. RILEY: Yes, we had anticipated that, and all the calculations were based on taking it to Tacoma.

THE CHAIRMAN: How would you take it from Vancouver to Tacoma?

MR. RILEY: By boat.

THE CHAIRMAN: The boat would go right through?

MR. RILEY: Yes. All the concentrates from from northern British Columbia are taken to Tacoma, and from Britannia they are taken to Tacoma.

THE CHAIRMAN: If it is high enough grade copper it goes to Tacoma?

MR. RILEY: Yes. The grade we had developed on these ore bodies on the Racing River was about 5 per cent or 6 per cent. It was very early in the stage of development; but with 5 per cent or 6 per cent, and fairly decent tonnage we could have made a profit on it. We had the analysis made by an engineer who had made a particular study of this phase of mining.

THE CHAIRMAN: Suppose a mine were developed at this spot, would that justify a smelter being built in the Peace River area?

MR. RILEY: No, I don't think so, unless it was big enough. If it were big enough...; but it would have to be quite large to justify a smelter. But we have had smelters already there, not that we would justify the smelter. We have had smelters





already there that could be enlarged to handle copper concentrate.

THE CHAIRMAN: Will you tell us a little about smelters? How much would a smelter cost to handle lead or zinc?

MR. RILEY: Well, it so happens we made a small study -- this is really a question for a metallurgical expert -- but we made a study of these smaller copper deposits at the Racing River, and we have found that there are small smelters being built which could be bought fairly reasonably. They are called Mace smelters. We had a man go down to Colorado and make an investigation of them. But that was a very small scale smelter that could be bought for \$100,000.

THE CHAIRMAN: It is a smelter that could be bought for \$100,000?

MR. RILEY: Yes.

THE CHAIRMAN: For lead and zinc?

MR. RILEY: Yes; but that doesn't produce the refined product. They produce only the pig. That is on a very small scale, and it would not...

THE CHAIRMAN: How much would you have to add to that to produce your refined product?

MR. RILEY: These types of smelters are used entirely on small ore deposits, and the pig product, or the matt in the case of copper -- when you get into that type of refinery you get into bigger money.

THE CHAIRMAN: What sort of money?





MR. RILEY: Millions.

THE CHAIRMAN: How many -- 10, 20, 30?

MR. RILEY: I would say 10 million dollars.

But you are asking a layman on the matter.

THE CHAIRMAN: We have a short brief from the refinery at Fort Saskatchewan, from the company who operates a refinery there, and they mentioned \$32,000,000 as the cost of their refinery.

MR. RILEY: A nickel refinery?

THE CHAIRMAN: Yes.

MR. RILEY: All of that. I imagine the plant at Trail is worth \$100,000,000.

THE CHAIRMAN: \$100,000,000?

MR. RILEY: Yes, I would say so. That is a very complex plant, with many chemical additions and adjuncts to it.

THE CHAIRMAN: How much would a custom smelter at the Peace River, which you have in mind, cost?

MR. RILEY: For what metal?

THE CHAIRMAN: Well, let us say lead and zinc?

MR. RILEY: For the Pine Point deposits?

THE CHAIRMAN: Yes.

MR. RILEY: Oh, I would be guessing at that.

I would think at least \$20,000,000.

THE CHAIRMAN: And if you were going to equip it for refining copper how much extra would be involved?

MR. RILEY: That, again, would depend quite largely on the tonnage they gained. It might be





equipped for... You are asking me these questions and I am having to guess because it is quite out of my line. I would say for a small scale, as a guess, \$1,000,000.

THE CHAIRMAN: Only an additional million?

MR. RILEY: On a small scale.

THE CHAIRMAN: The reason I am asking you these questions is that it sounds very interesting to have in mind a custom smelter in the Peace River area that will support large mineral deposits; but I wondered how large a venture that would be, or what the possibilities were of such a smelter being built.

MR. RILEY: Let me say this on this question, that this was a radical idea and a very interesting idea, because it laid out the development of a sort of empire in there. I would think it would be possible for you to call as a witness an expert such as Professor Frank Forward of the University of British Columbia, who is an outstanding metallurgist -- one of the most outstanding metallurgists in the world. He is a man who can give you the whole idea and the whole concept of the Sherritt, Gordon plant at Fort Saskatchewan. I think it would be well if he could be brought here as a witness, because he could give you the answers to your questions very precisely.

THE CHAIRMAN: Well, do you feel that the cost of custom smelting has a bearing on the argument you have been advancing in pages 2 and 3 of your brief?

MR. RILEY: Yes, it would naturally have a





bearing, because you have to have profits in order to pay off the capital cost of your smelter and all the interest on the money borrowed to build it; but the savings should be great enough to meet that and to make a great deal of profit besides.

THE CHAIRMAN: Can you give us any idea of any person who might build a smelter there...

MR. RILEY: No.

THE CHAIRMAN: ...if there were a railway from Pine Point to Grimshaw?

MR. RILEY: No, I couldn't say who would do that; but mining companies and smelting companies such as Anaconda, American Smelting and Refining and Consolidated Smelting and Refining of Trail would, naturally, be interested if it was profitable; Noranda would be interested if it was profitable.

THE CHAIRMAN: What about Consolidated Mining and Smelting? Is their plant at Trail running at full capacity now?

MR. RILEY: No, I don't think so; it is running as near capacity as possible at the moment. Their markets have been somewhat limited in the last two or three years, as you know.

THE CHAIRMAN: It doesn't look, does it, as though they would like to build a smelter at Grimshaw for the ore at Pine Point?

MR. RILEY: If a process were discovered which would make it profitable for them to build a





smelter at Grimshaw and continue to treat the stuff at Trail they would do so.

If some metallurgist such as Forward could develop a process for using natural gas or oil and combining with coke that would make it that much cheaper, and they would be forced by economic considerations to build one there. They would be the natural people to do it.

COMMISSIONER GAINER: Does it seem likely to you that a smelter would go forward in the Peace River country if there was one located for copper and nickel in this area, or on the west coast or in Montana and so on? Would the extra 200 or 300 miles difference between your metal and your concentrate make that much difference? Would it make much difference to have a smelter, let us say, just 200 or 300 miles closer to the ore?

MR. RILEY: Are there any smelters 200 or 300 miles closer?

COMMISSIONER GAINER: I was going on the Sherritt, Gordon Company's possibilities. They are interested in custom work on the west coast smelters and in Montana.

MR. RILEY: Shipping to anywhere else but Edmonton -- I think their only interest is so far as the nickel centres round there.

COMMISSIONER GAINER: I believe they have indicated an interest in developing custom smelting of





copper ore, and it would not take a large additional investment to go into that.

MR. RILEY: That would be very much better for northern British Columbia, if discoveries large enough were made to warrant it, and then shipping into Montana or Tacoma.

COMMISSIONER GAINER: But what I am more interested in is supposing these things do build up, we will say, in the Vancouver, Montana or southern regions, is it likely that large scale smelting -- would you say it would be worth while to build a smelter a couple of hundred miles closer to the ore?

MR. RILEY: It would depend a good deal -- it would depend entirely -- on the size of the ore body. It is a matter of economics. If you can save enough from a 200 mile haul over the area for the size of ore body to justify the placing of a smelter, you would do so. It is a matter of speculation. It depends entirely on the size of ore body developed.

COMMISSIONER GAINER: In the case you mentioned it didn't even approach the point of considering a smelter?

MR. RILEY: No, not yet; copper ore deposits of any account have not been discovered large enough yet to warrant it.

COMMISSIONER GAINER: What size of ore body were you working on there?

MR. RILEY: The copper ore deposits up there





are all relatively small. We had hoped, as the thing developed, for about 500 tons a day; but that is not nearly large enough to warrant the establishment of a smelter of that size. Maybe one of these small Mace smelters, yes; but for large scale smelting and refining, not nearly large enough.

THE CHAIRMAN: Suppose you could ship it into Edmonton to be refined here, would that be practicable?

MR. RILEY: We never thought there was a possibility of shipping copper ores in here. Nickel ores, yes, but not copper.

I think, in order for Sherritt, Gordon to establish in Fort Saskatchewan -- at least, for copper ore-- they would have to be ensured of large supplies.

THE CHAIRMAN: If we could adjourn for just a moment I would like you to see this letter which we have from Sherritt, Gordon.

--- A short recess.





THE CHAIRMAN: Dr. Riley, you have seen now, haven't you, the letter that Sherritt Gordon Company have written to us?

MR. RILEY: Yes, sir.

THE CHAIRMAN: With the suggestion that their refinery at Fort Saskatchewan might handle copper concentrates. What do you say to that in relation to what you have been saying?

MR. RILEY: I think it would be a very good thing to have an extra facility for the treatment of copper concentrate, because we need that as much as possible to develop in Canada.

THE CHAIRMAN: Do you think it could perhaps take the place of the proposed refinery that you have been mentioning for the Peace River area?

MR. RILEY: They mention only copper here, and cobalt and nickel.

THE CHAIRMAN: They are refining nickel and cobalt?

MR. RILEY: I think they mention cobalt in the brief, and copper, but they don't mention zinc.

THE CHAIRMAN: Could they handle lead and zinc as well?

MR. RILEY: I think they would have to start again and have a separate unit. I don't think you can combine lead and zinc with nickel. They would have to start again and build a completely new plant for the lead and zinc.





THE CHAIRMAN: If one had a lead-zinc refinery, would the converse be true and would it be necessary to build an entirely separate unit for nickel?

MR. RILEY: Yes, it would be necessary for nickel and a separate unit for copper. You can use the same administrative centres, naturally.

THE CHAIRMAN: I suppose that is a small part of it?

MR. RILEY: Yes. It would be a saving, though.

THE CHAIRMAN: What do you say to this: there is already in Edmonton a \$32 million plant that will refine nickel and with, I take it, a relatively small expenditure, it can refine copper as well. It might be advantageous to have a further lead-zinc refinery built here, might it not, because wherever an orebody is found, whether it is lead, zinc, copper or nickel, the refining processes are available in Edmonton, whereas if you had the one refinery here and another one at Peace River ---

MR. RILEY: No, you have to have one either here in Edmonton or in Peace River. I think eventually what will happen is that it will either be here or at Peace River.

THE CHAIRMAN: And is it not better to have one big plant which will handle all four, lead, zinc, copper and nickel?

MR. RILEY: I don't think it matters in the





case of lead-zinc; it would in the case of copper, except from the point of view of administrative economies. I don't think you would have much saving in that. I haven't heard of anywhere in the world where you have combined lead, zinc, copper and nickel; they are separate. At one time in Trail there was a copper branch to the lead-zinc in Trail; that has been since closed. I can visualize this, that the concentrates from Pine Point could be shipped to Edmonton and refined in Edmonton, not likely by Sheritt Gordon but by Consolidated Mining, if the distance from Peace River didn't make it more advantageous to do it there. I think eventually that will be the case; they will be treated either in Edmonton or Peace River.

THE CHAIRMAN: That is provided the thermal process is used?

MR. RILEY: Yes.

THE CHAIRMAN: I take it you suggest there is an additional advantage to Peace River in that there is a saving in power. If electricity is wanted, it looks as though there will be an advantage there, much cheaper than in the Edmonton area?

MR. RILEY: Yes.

THE CHAIRMAN: Or is that a certainty, that there will be cheaper electricity in the Peace River area than in the Edmonton area?

MR. RILEY: I couldn't say as to that. I think you develop power here rather reasonably in





Edmonton thermally, but I don't know. But it is certain there will be large quantities of power available in Peace River eventually, because Peace River will be developed in time to come.

THE CHAIRMAN: Dr. Riley, you are mentioning the question of the natural gas that is available in the Peace River area. During the adjournment I pointed out to you that yesterday the Royalite Company gave us a brief and pointed out that they hoped to have a lot of their cheap fuel available in the oil sands at a point near Fort McMurray and, consequently, fairly close to Pine Point. Do you think that might serve the purposes of refining northern ore?

MR. RILEY: Did they specify what type of fuel they would have? Was it oil?

THE CHAIRMAN: It is something that comes from the oil sands.

MR. RILEY: It would therefore be an oil product.

THE CHAIRMAN: It is not gas.

MR. RILEY: It is liquid. Well, my understanding of these new methods ---

THE CHAIRMAN: They contemplate two products, a liquid and a solid.

MR. RILEY: My understanding of these new thermal methods -- and certainly it is out at the Fort Saskatchewan refinery -- is that the gas is the fuel which is the most requisite, most advantageous in the





treatment of these concentrates. It is easier and there is a chemical process involved. Again I don't want -- I don't know enough about it to be too precise on the point, but certainly they use gas for the refinery at Fort Saskatchewan.

THE CHAIRMAN: Do you mind coming back to your original proposition of a metallurgical centre in the Peace River area which might serve the area along the Alaska Highway? Now, that involves trucking concentrates from the Peace River, doesn't it? Do you know anything about the prospects of a refinery up the Alaska Highway?

MR. RILEY: No, not up the Alaska Highway. The papers are carrying stories recently of a railway running northward from Prince George, the Yukon.

THE CHAIRMAN: Is that the only proposed route for that railway?

MR. RILEY: The natural route is up the Rocky Mountain trench.

THE CHAIRMAN: If that railway were built up the trench, would it help to get concentrates down the Peace River area?

MR. RILEY: Not the Alaska Highway below Mile 500.

THE CHAIRMAN: And is it below Mile 500 that you think most of the orebodies are likely to be found?

MR. RILEY: No, from Mile -- say Mile 350 westward. So that the concentrates -- the point you





are thinking of, sir, is how those concentrates could come down. They would have to come down by truck, as far as I know now.

THE CHAIRMAN: Could they be trucked north and west along the Alaska Highway to meet the new railroad and then come back down the Rocky Mountain trench and then to Peace River?

MR. RILEY: Of course, at Finlay Forks and down the Peace River, but there is no road there, as far as I know now.

THE CHAIRMAN: If this railroad goes north of Prince George and up the Rocky Mountain trench, does it meet the Alaska Highway?

MR. RILEY: Yes, at Watson Lake. That would be a very accessible route -- I hadn't thought of it -- and down to Finlay Forks. But there would have to be a road from Finlay Forks to Peace River, which doesn't exist at the present time.

THE CHAIRMAN: Would it be feasible to take something from Watson Lake down this railroad if it is built to Prince George?

MR. RILEY: Yes.

THE CHAIRMAN: And then from Prince George -- yes, from Prince George it doesn't tie in with the ---

MR. RILEY: It would have to go back by P.G.E. then.

THE CHAIRMAN: It would have to go back by P.G.E. to Dawson Creek?





MR. RILEY: Yes.

THE CHAIRMAN: That would be a pretty long route?

MR. RILEY: Yes, a fairly long route.

THE CHAIRMAN: Do you think it would be cheaper to truck it down the Alaska Highway to the Peace River area?

MR. RILEY: Are you calling a Mr. Guest?

MR. FOUKS: Yes.

MR. RILEY: There is a Mr. Guest who is going to appear before you and he has those figures on the transportation costs. He is an expert and he would be a good man to ask that. I would be guessing as to a knowledge of these freight rates.

MR. FOUKS: Mr. Guest is in Ottawa on the Railway Commission. He has all this information right at his fingertips.

THE CHAIRMAN: Well, I take it there is no further help you can give us, Dr. Riley, on the question of how the question of how the area around the Alaska Highway can be opened up?

MR. RILEY: No, I think not, sir.

THE CHAIRMAN: By the building of the railway we are concerned with?

MR. RILEY: No. It is pretty much all in the tentative stage, and whether that railway -- the natural route is down the Rocky Mountain trench, but if you could make a cut-off from Finlay Forks across the Peace River you would save some distance. That





might happen, but again it is very speculative.

So there is very little more I can add, except that we would like to see some sort of development that would assist in the exploration of the northern part of British Columbia.

THE CHAIRMAN: Your argument is this, is it not, that if the railroad is built between Grimshaw and Pine Point, that is going to encourage the building of a customs smelter near Grimshaw, and if a customs smelter is built near Grimshaw that will encourage the development up and down the Alaska Highway?

MR. RILEY: That is correct. Furthermore, we felt this, that it would tend to assist in the development and growth of all that country in that general vicinity, in that area. The fact that there was a town or an industrial centre would assist in the general economic development of the area.

THE CHAIRMAN: Mr. Finland is here. Perhaps he can tell us something about the discussions which are going on concerning the railway up to Alaska.

MR. FINLAND: It is very much in the talking stage. This Commission was set up two or three years ago to examine the possibilities of railway and highway connections between continental United States and Alaska, and I think the important question at the moment, and the only one that has any practical elements in it, is the paving of the Alaska Highway; the others are still being considered.





I was to have been away when the Commission was to get here on Monday, but it didn't get here, I believe. But there has been a brief presented giving the picture east of the mountains. I don't think the railroad is much more beyond the casual talking stage yet. There is a lot of mutual interest between the western states and British Columbia at the moment, and that could develop into a railway going up British Columbia, and that could more or less answer Dr. Riley's problem of getting transportation into the Watson Lake area.

THE CHAIRMAN: And up and down the trench?

MR. FINLAND: If they flooded the trench it is going to make it a pretty tough railroad proposition. They are talking about a 600-foot dam and the idea is to bring the water up to the peak of the pass at Prince George. I think it may be a question of either going to flood the trench or railroad. The two don't appear to be a combination, and that is why it is at this stage. It doesn't appear to be too feasible to run a railroad along the mountain tops.

THE CHAIRMAN: You yourself are taking part in some discussions?

MR. FINLAND: Yes, sir.

THE CHAIRMAN: With a view to trying to get a railroad built east of the mountains rather than the trench?

MR. FINLAND: Our point is that from Chicago, central United States is 600 miles closer to Fairbanks  
(Page 579 follows)





than going west on up to the mountains.

But that brief was presented over a year or so ago and the whole question is still, I think, in the talking stage. The Commission didn't get here, so I don't think there was much opportunity. I was away. I don't think there was much opportunity to present the whole picture again.

THE CHAIRMAN: Well, we have interrupted you, Dr. Riley. If you wouldn't mind waiting for a moment; maybe my colleagues would like to ask you some questions about this part of the brief we have been dealing with.

COMMISSIONER GAINER: Not so far.

THE CHAIRMAN: You had read to the middle of page 3, Dr. Riley.

MR. RILEY: Another point of long-term interest to the national welfare enters this matter of rail location. Everything possible should be done to diversify centres of population and industry of which western Canada has far too few. Any more that can be made to create industry in places of great potential resources, such as the Peace River and its environs, with the consequent growth of cities and towns broadens the base of the country's economy and thereby greatly strengthens the state. For many years the Peace River district has been spoken of as the "last great west" but to date its only development has been a few small towns based for the most part on agriculture. The sulphur





plant at Taylor, B. C., is an example of what industry can mean to an area. New wealth comes in and the district ships its products to Pacific ports and world markets.

At the present time sulphur is going from Fort St. John to Prince Rupert and Vancouver for sale at the various sulphur plants.

In our opinion, the importance of providing northern Alberta, northeastern British Columbia and the Northwest Territories with the shortest possible rail route to the Pacific Ocean cannot be over-emphasized. It is now an obvious fact that during years to come countries bordering the Pacific Ocean will play an increasingly important part in the industrial progress of the world and will provide a large market for a variety of raw materials, including those from our mines. It would appear the western route has a distinct advantage in this respect. Construction by the federal government of any railway into the Great Slave Lake region that does not utilize to the utmost the advantages of a direct connection with the Pacific Great Eastern Railway and the Pacific Coast would appear most unwise and not in the best interests of Canada as a whole.

As far as mineral deposits adjacent to the two proposed routes is concerned, we have been advised by the Alberta Department of Mines and Minerals, Edmonton: "So far as is known, there are no mineral deposits adjacent to the proposed rail route between Grimshaw and the Alberta-Northwest Territories border."





It is understood, however, that a large deposit of gypsum has been found north of the border. Gypsum is also found in Wood Buffalo Park close to the route the railway would take from Waterways to Pine Point. However, no mineral claims may be staked inside the Wood Buffalo National Park. So far as is known, this is the only mineral occurrence on the Alberta side of the border and near the rail route."





I noticed in the press on September 12th that a large iron deposit had been discovered at Heinz Creek, which adds, of course, to the mineral resources of that part of the country.

I think you probably had a memo on that.

THE CHAIRMAN: Yes, we have heard about it. This appears to be served already by a railway.

MR. RILEY: Yes. We were thinking of it as another resource being added to that particular part of the country.

It might be argued by some that the eastern route is the more favourable one as it is closer to the pre-Cambrian Shield. I do not consider this to be a sound argument. The proposed railway is planned for the express purposes of tapping the large lead-zinc deposits at Pine Point and opening up mineral-bearing areas around Great Slave Lake, including Yellowknife and Mackenzie River. I would suggest that in the event of important mineral discoveries being made to the east, the pre-Cambrian Shield could best be served by a railroad running through northern Saskatchewan and Manitoba, possibly tying in with existing branch lines of the CNR to Churchill and Lynn Lake, with additional north-south "feeder" lines. In my opinion, it does not appear too imaginative to visualize such a rail system eventually connecting with the line to Great Slave Lake and to the Pacific Ocean by PGE, CNR, and CPR. Such a line would open up the central portion of Canada's





pre-Cambrian Shield and make possible operation of mineral deposits in that vast area.

In conclusion I would point out that for many years river boats travelling on the Mackenzie River system from Waterways have provided transport facilities that have been adequate for most purposes. To parallel this water transportation route with a rail line would not suggest selection of the best possible route. On the other hand, a railroad connecting Great Slave Lake with the Peace River area could be the foundation of a vast new industrial centre, supplemented by the great agricultural and other resources already known to exist there. Such a centre would go a long way in helping to stabilize the economy of the whole of Canada's Pacific Northwest.

Respectfully submitted,

Dr. Christopher Riley,  
President,  
B.C. & Yukon Chamber of Mines.

THE CHAIRMAN: Thank you, Dr. Riley.

With regard to the last paragraph of your brief, you are suggesting that it might not be too good an idea to parallel the water transportation route in the east with the railroad. Those who advocate the east route say it wouldn't be a good idea to parallel the present highway with a railway on the western route. What do you say to that?

MR. RILEY: You want to know my reasons?

THE CHAIRMAN: Yes. Is your argument more





valid than the other with regard to the highway? You are both talking about duplication of service.

MR. RILEY: Yes; it has quite a bearing on the one argument and the other.

From the point of view of prospecting and exploration of the pre-Cambrian areas adjacent to those parts a railway is totally unnecessary because most prospecting to date has been made by the use of aeroplanes; so that the prospecting of the area will not be helped at all; and those people have been able to get in over the years. This part of the pre-Cambrian Shield has been prospected since about 1928, 1929, and the bit in this particular section, north eastern Alberta and the west part of the pre-Cambrian Shield -- nothing has been located, although it has been fairly intensively prospected. Nobody can say that anything of some merit may not be found, but at the same time there does not exist the same favourable belt of rock as exists in the Yellowknife belt. It just isn't there.

THE CHAIRMAN: What is the nature of the belt of rock east of the proposed Waterways route and from Lake Athabasca up to Great Slave?

MR. RILEY: Up to about the Beaverlodge area it is granite nizites. Nobody can say you wouldn't find something in them, but they are not as favourable as what you would get in greenstone or sediments.

During the uranium boom of 1950 there was a good deal of activity in that area. There were some





small deposits found, but none of them had sufficient significance to make it worth while developing them. From the point of view of prospecting a railroad isn't necessary.

If you thought that it would help to drive a railroad into the pre-Cambrian that would be the thing to do, but you can't drive railroads through the pre-Cambrian unless you have some mineral to drive to and some reason for them being there.

It is true that there was a railroad driven in northern Quebec, but that was to the iron deposits; there was a railroad driven up to the Lead Lake, but that was to the nickel deposit. I think that the most sensible and logical way of developing an area is for you to make the discoveries and then put the railroad into them.

THE CHAIRMAN: Would you mind bringing you map up here and letting us see what your proposal is about a railroad coming from Churchill or Lynn Lake.

MR. RILEY: This is entirely speculative. If it were desired to develop this area of the pre-Cambrian here (indicating) you could take a road through in this country...

THE CHAIRMAN: For the benefit of the reporter, you are indicating from Lynn Lake...

MR. RILEY: I certainly wouldn't drive a railroad here (indicating), but if one were to be driven we could swing it up this way (indicating).





This (indicating) is not bad country in here.

COMMISSIONER THOMPSON: What would you say to a railroad coming up around the north of Great Slave?

MR. RILEY: Tremendously costly.

COMMISSIONER THOMPSON: Would it open up interesting country?

MR. RILEY: No; my opinion is that the pre-Cambrian can be opened up by the existing facilities, by using aeroplanes. When discoveries are made that would be when to drive the railroad into the pre-Cambrian. If it were opened up this (indicating) would be the sensible route, which would tie them in here (indicating).

For instance, when the nickel discoveries of northern Manitoba were made the railway was extended across Mile 82 -- somewhere in this country (indicating); and if nickel deposits were discovered at Ferguson Lake... You might find that the discoveries, when made eventually, would be somewhere over here (indicating), or a great distance from it. I don't think it makes sense to drive a railway through the pre-Cambrian just in the hope that minerals might be found somewhere close to it.

COMMISSIONER GAINER: From the point of view of development rather than prospecting would it make some sense to put your existing facilities, if they are going to go in, generally closer, or as close to favourable structures as might be possible, even although the exact location of these possibilities might not be





known? In other words, might it make some sense to construct existing facilities as close as possible to later development.

MR. RILEY: No; I would think -- you are speaking of development, or the further exploration of...?

COMMISSIONER GAINER: What I had in mind was, if and when discoveries are made, to build a feeder line into these discoveries, so that you may only have to build 50 miles instead of 150.

MR. RILEY: Yes; you have to make your discoveries near, or reasonably close to, the feeder line; but the hope of making discoveries, especially in an area which has been pretty well prospected, is a long-term gamble -- to put a line in in the hope that, somewhere near that main line, something will be discovered. It doesn't make too much economic sense.

COMMISSIONER GAINER: But I think the argument is that even although the country that is being prospected is barren, let us suppose, and turns out to be so in years to come, then, even beyond that it might be 700 miles instead of 900 if you go that much closer? Whatever you are going to do you will have to bring it out a shorter distance.

MR. RILEY: Yes.

COMMISSIONER GAINER: Let me ask you as to your evaluation of this part of the Shield lying between Lake Athabasca and the east end of Great Slave Lake. We have had several opinions on it, and we would be





interested in yours generally.

MR. RILEY: Well, I can tell you, I think, as well as anybody. There are a number of us here who know this country quite well; but in any part of the pre-Cambrian Shield, up to date, there has been no discovery made. There is a possibility in this belt around here (indicating) and in the greenstone belt here (indicating). That is a possibility.

THE CHAIRMAN: Is this the area where the green spots are marked on the map?

MR. RILEY: Yes; but it so happens that these are somewhat younger rocks than the Yellowknife series. That (indicating) is a more favourable section there. This part here (indicating) is much less favourable than this part here (indicating).

COMMISSIONER GAINER: Just speaking structurally?

MR. RILEY: Not only structurally -- yes, you might use that word. The point is that most mineral deposits in the pre-Cambrian are found associated with older rocks which form small islands of favourable structures. In this Great Labrador area everything has been found. In the Yellowknife area everything has been found in this greenstone belt lying north and south of Yellowknife; and in 90 per cent of cases all the ore bodies are found in the older rocks. In this particular case, so far as we know, it is all nizites except that part around the lake area.





COMMISSIONER GAINER: Then, looking at any point within the green area south east of the lake -- let us say, here (indicating) -- if a development comes forward and this has to be trucked or railed out in the future you would think it not worth while to rail it to somewhere in the Fort Smith area rather than that much further west?

MR. RILEY: It depends. It would be a consideration, yes. There have been discoveries there. There was quite a good-sized, fair discovery made by McAvoy. That would naturally be brought to the lake by boat over to this point (indicating) for shipping. But most of the discoveries, if they were close to the Athabasca Lake, would come down by water.

If a discovery were made in here (indicating) naturally if the railroad was along here (indicating) then it would be so much closer.

THE CHAIRMAN: So that we can have our record straight, on the map that we are referring to the area that you think is favourable is this portion that is marked in green between Great Slave Lake and Lake Athabasca? And when I say "favourable"...

MR. RILEY: The most favourable, yes.

THE CHAIRMAN: ...I mean it is the part worth looking at?

MR. RILEY: Yes.

THE CHAIRMAN: And this part marked pink, you think, is unfavourable prospecting country?





MR. RILEY: Yes.

THE CHAIRMAN: The greenstone you have referred to as being the prospecting area is the part that is marked in green on the map?

MR. RILEY: Greenstone and sediment mixed.

THE CHAIRMAN: And it is marked in green on this map?

MR. RILEY: Yes. Those (indicating) are the younger rocks.

THE CHAIRMAN: That is, south of Lake Athabasca?

MR. RILEY: That is not a favourable area because they are all so young as to be quite flat-lying and not a favourable area for prospecting. This (indicating) is much later rock -- actually, has been later than the granite. You see, a lot depends on the age of these things. Most of these are older than the granite, and the granites have brought the mineral deposits into these islands of rock.

THE CHAIRMAN: Just to make sure I am going to write here "not favourable."

MR. RILEY: Yes.

THE CHAIRMAN: That is the area between Lake Athabasca and Great Slave Lake?

MR. RILEY: Yes.

THE CHAIRMAN: I would like to read the following which appears in the brief which has been submitted by the Commissioner of the Northwest Territories. It starts at the bottom of page 7 and continues on page 8.





Perhaps I could read it aloud:

"New mineral and related mining traffic from the Northwest Territories is also potentially available to the Waterways route. Since 1958 about 400 new mining claims have been recorded within an area located 60-70 miles north east of Fort Smith. Significant nickel and copper occurrences are indicated in this area. Findings to date have been very good, and within the next year, perhaps, it will be known whether these deposits are susceptible to economic development or otherwise. Studies conducted in conjunction with the Department of Mines and Technical Surveys indicate that the prospect for mineral development in the area north and east of Fort Smith are so good that plans are under way which will lead to the construction of a development road through the area. This road would connect with a railway from Waterways just west of Fort Smith. A railway by this route will obviously lower costs and hence aid development in the area, while such developments as do occur will provide additional traffic and revenue. Additionally, if restrictions on mining in any of the area now comprising Wood Buffalo Park are lifted, an available gypsum deposit near Peace Point can be brought into production..."

I would like to ask you about the gypsum later, but what do you say about the first part of that paragraph?





MR. RILEY: 50 to 70 miles north east...

THE CHAIRMAN: Of Fort Smith -- in the greenstone.

MR. RILEY: Well, I haven't heard of it, and I don't think anybody else has heard of it.

THE CHAIRMAN: We have heard of it. It has been referred to several times in the briefs that have been given to us; but I think it is something that is of fairly recent knowledge.

MR. RILEY: Have you heard of it, Mr. Thompson?

THE CHAIRMAN: You don't know of it, in any event?

MR. RILEY: I am in the exploration business and I am associated very closely with people who are, and we are constantly looking for news of this sort of thing. We also have a mining paper -- several mining papers -- which are always looking for news. None of us have heard of these deposits, and that rarely occurs without hearing of them. But this is a Government publication...

THE CHAIRMAN: This is by the Commissioner of the Northwest Territories, who has filed this.

MR. RILEY: I think before you accept this it should be substantiated by some sort of documents that are much more specific than this.

THE CHAIRMAN: Here is the brief of Mr. Brintnell. I am referring to paragraph 4 on page 3. He refers to the same thing.





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MR. FOUKS: I am wondering if the one got it from the other.

THE CHAIRMAN: Mr. Brintnell also refers to it in the Northern Miner.

COMMISSIONER GAINER: I think the oral testimony specified the names of the interests.





THE CHAIRMAN: I would like to ask you about the gypsum. Do you know about that gypsum deposit in the Peace Rover?

MR. RILEY: No, only as far as it has been referred to in the Alberta Research Council Reports.

THE CHAIRMAN: You haven't seen it yourself?

MR. RILEY: No, I haven't. I question very much either one of them -- it is a very low-priced product and it doesn't stand too much competition. The one at Wood Buffalo Park -- I doubt if you can stake it. You can't even go on to the parks and prospect and stake claims.

THE CHAIRMAN: Is that the gypsum deposits in the Wood Buffalo Park?

MR. RILEY: Yes. It is mentioned in the brief. It is very difficult to get the restrictions changed. They might, I suppose, but we haven't been able to get any lifting of the restrictions.

MR. FOUKS: Mr. Chairman, that remark in Brintnell -- which one were you referring to? -- Page 3, No. 4?

THE CHAIRMAN: Yes, I think so.

MR. FOUKS: He does say there that this group has not released it publicly yet. I was just wondering where the information came from.

THE CHAIRMAN: From a newspaper referred to, and Mr. Brintnell, I think, has some knowledge of it.





MR. FOUKS: I was just wondering if it came from the same report, because they clash.

THE CHAIRMAN: I don't recall the source of his information. It was, I think, from some publication.

MR. BALDWIN: I might be able to be of some assistance in connection with these claims. I was in the office of Mr. Robertson, I think some time last winter. He was trying to convince me of the virtues of the eastern route, and he said he had a telephone call from Mr. Hirshorn --

THE CHAIRMAN: The Commissioner or his representative is going to be here and I think we can get the whole story direct from them, so far as their knowledge is concerned.

MR. BALDWIN: I understood he wasn't going to be here, that his representative was.

THE CHAIRMAN: How would it be if we waited until the question was raised at that time? The only reason I am raising it now is in case Dr. Riley could give us some assistance on it. I think it would be very helpful to have it when the Commissioner is dealing with the subject or his representative is dealing with it rather than now.

MR. BALDWIN: I will wait for that.

THE CHAIRMAN: Have you any questions, Mr. Gainer?

COMMISSIONER GAINER: I have just one general





question, Dr. Riley, concerning the main crux of your argument here. I take it that the two main points you make are that the industrial developments and metallurgical developments might go ahead in the Peace River area, and this would benefit the general area; and, secondly, the western route would provide a greater number of connections for products moving south and to the coast. That I can understand.

What I am interested in, though, is -- is there anything about the location of this western route being reasonably far east in terms of the mineral areas of British Columbia? Is it likely that that would prove to be any great assistance to the development of mineralization in north-eastern British Columbia? Is not the ore likely to move, such as is found, generally along the trench rather than to move east to a line coming down, let us say, the Hay River to Grimshaw? I am speaking not of the southern end but just the line picking up and assisting development in British Columbia and west?

MR. RILEY: Yes. We felt it was a much greater distance, and I certainly agree that the mineral products, like any other product, are going to move the cheapest way it can to the market. But the distance is much closer to the Peace River area to that part of British Columbia than it is to the southern part of British Columbia. If we developed in the Peace River area a metallurgical centre, we feel certainly it should help





that part of the Province. Is that specific enough?

COMMISSIONER GAINER: Yes, I can understand that. I see how this would benefit, but what I am wondering is this. You wouldn't suggest that the line north of Grimshaw or that part of the line would do very much to open up development in the mountains of British Columbia, I will say, in the north-eastern section.

MR. RILEY: No, we haven't thought of that. We have thought chiefly of the Alaska Highway and the possibilities of what might be found along the highway.

THE CHAIRMAN: Can you give us anything more with regard to the paragraph at the bottom of page 3?  
"...the importance of providing northern Alberta, north-eastern British Columbia and the Northwest Territories with the shortest possible rail route to the Pacific Ocean cannot be over-emphasised..." I take it you are thinking of markets outside of Canada for our minerals?

MR. RILEY: Yes, I havethought of that. It is very hard to predict in a country as new and as undeveloped as Canada precisely what will happen, but it is obvious, if we can develop fairly high-priced products, mineral products, that it will be of great assistance, and it necessarily will be a high-priced product from an area such as Great Slave Lake, which is a long way out. But if we can develop the best access to the Pacific Ocean it would be of great advantage.

THE CHAIRMAN: Do you know of any specific





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markets? Is there any demand for Canadian lead in Japan, for instance?

MR. RILEY: There is, as I understand it, at the present time, a small market for Canadian lead in Japan; not too great. But even in Calgary I met a Japanese technician who has been in Alberta looking for raw materials, partly-finished materials from Canada, and for over the last 6 months or even a year Japanese technicians and, I suppose, chemists have been in and out of Calgary and moving about the north looking for what they can find in the way of raw materials. So Japan should furnish a good market to us for various natural products we can provide them.

THE CHAIRMAN: Can you tell us whether it would be feasible to ship concentrates to Japan?

MR. RILEY: I doubt if it would be feasible to ship lead-zinc concentrates to them, but there is a small nickel mine 125 miles from Vancouver which will be shipping nickel concentrates to Japan as soon as they finish the contract with Sherritt, Gordon. That contract will be over shortly and then the concentrate will go to Japan.

THE CHAIRMAN: That is nickel concentrates?

MR. RILEY: Yes.

THE CHAIRMAN: Lead-zinc would go only in the refined form?

MR. RILEY: Yes.

THE CHAIRMAN: What do you say about copper?





MR. RILEY: They are taking copper concentrates from Vancouver Island now.

THE CHAIRMAN: To Japan?

MR. RILEY: Yes. In fact, the Japanese paid, I think, \$200,000 or \$250,000 advanced money for the shipping facilities, that is docks and storage sheds for the development of a mine. So they are shipping iron ore, of course, from Vancouver Island and from British Columbia.

THE CHAIRMAN: Just the ore; the ore is shipped out to Japan?

MR. RILEY: Yes.

THE CHAIRMAN: And refined there?

MR. RILEY: Yes, and refined in Japan.

THE CHAIRMAN: Are there any other markets which might be available?

MR. RILEY: Well, I see great possibilities for the sulphur market. Sulphur will be produced in increasing quantities from Canadian gas, particularly north-western Alberta and north-eastern Alberta and I see huge markets for sulphur to India and those countries which require agricultural fertilizer.

THE CHAIRMAN: Are there any new sulphur deposits?

MR. RILEY: There is so much sulphur being produced from natural gas in Alberta that I don't think any new sulphur deposit will be developed as long as they are getting it from gas.

THE CHAIRMAN: What about new markets for





these minerals?

MR. RILEY: Japan particularly. There is a large deposit just north of the British Columbia border and east of the Yukon border. The market for that will be the United States. That could be shipped out economically if the price was a little better, and it will be. Certainly Japan; there would be a tremendous market for all our mineral products that we can ship there economically.

THE CHAIRMAN: Mr. Feehan, have you any questions?

MR. FEEHAN: Yes. Mr. Bishop has asked me to ask a few questions.

THE CHAIRMAN: Dr. Riley, I should say that Mr. Feehan is our Commission counsel, and if anybody advocates the western route, he takes the position of those who are advocating the eastern route.

MR. FEEHAN: Can you tell me, Doctor, what the cost of freight shipment of, say, ores or concentrates per ton mile would be?

MR. RILEY: From where?

MR. FEEHAN: Generally speaking, the cost of such shipments between any location and another in Canada?

MR. RILEY: Well, it would depend entirely on the part of Canada you are located in. The shipments along the Alaska Highway would be more costly, I guess, than the more accessible areas. Per ton mile would depend certainly on the distance. It is about





6 cents a ton mile from, I think, Watson Lake; I am not sure. Would you defer that question for Mr. Guest? He knows much more about freight rates than I do.

MR. FEEHAN: Between Pine Point and Edmonton is approximately 60 rail miles shorter -- I am going by McMurray -- than it would be going by Grimshaw, and is it not true that this would make a substantial reduction in the cost of transporting ore bodies or concentrates along the eastern route?

MR. RILEY: Well, it depends on the total distance they are shipped. If they are shipped 5,000 miles it is only a very small percentage; if they are shipped 300 miles it would be 25 per cent.

MR. FEEHAN: It would certainly be true if a smelter were to be built at Edmonton?

MR. RILEY: Of course, you have got a distance of about 250 miles shorter to Peace River than to Edmonton.

MR. FEEHAN: If a smelter were to be built in Edmonton, certainly you would agree that the ore could be shipped to Edmonton less expensively via the east route?

MR. RILEY: If you are bringing it through Grimshaw and Waterways?

MR. FEEHAN: Yes.

MR. RILEY: Of course, you are saving 50 miles. My argument is if you build it in Peace River you have 250 miles shorter. Out of 700 miles you





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would save 50 there.

MR. FEEHAN: That is all, sir.

THE CHAIRMAN: That is all, Dr. Riley, thank you very much.

MR. RILEY: Thank you, sir, for permitting me to present it.





SUBMISSION OF  
LAC LA BICHE CHAMBER OF COMMERCE

Appearances:

Mr. Michael Maccagno

Mr. E. Garnet

Mr. Michael Hamar

Mr. J. Stewart

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THE CHAIRMAN: Mr. Maccagno, you are going to give us the brief for the Chamber of Commerce of Lac La Biche?

MR. MACCAGNO: Yes, sir.

THE CHAIRMAN: Have you others with you?

MR. MACCAGNO: Yes, sir.

THE CHAIRMAN: Mr. Maccagno, we would be very glad to have you elaborate on your brief if you wish to do so.

MR. MACCAGNO: As you will see, sir, this is not presented in brief form; it is more or less a letter addressed to the Commission.

Before going into it, it would be perhaps proper to explain that we are a town about 170 miles south of McMurray and about 150 miles north of Edmonton, and in the eastern portion naturally we are very interested in developing our portion of the Province.





You will also, perhaps, be interested to note that Lac La Biche is the end of the highway. Once you get there there are no more roads leading north.

In presenting this letter to you you will notice we have left out any figures, and you will also note that we have been guided mainly by the report of the Northern Development Commission -- that is, the McGregor Commission. Naturally, it was much easier for us, in the eastern portion, to go ahead and agree with what was recommended.

I would also like to point out to you that we are looking at it on the basis of the people living in the North. As we understand it now it would appear that we come to the position of a man who is drowning in a stream and there are two people on the side with sufficient rope, but they are arguing about "Where are we going to throw it from."

I would like to point out that we suggest, on behalf of the people of the north, that a railway should be built, but we certainly don't take the stand that it should be built only in conformity with our views. We say it should be built where it would serve the people best.

Perhaps I had best read what we have here, and then I would answer any questions you have the best way can.

THE CHAIRMAN: Yes.





It has been generally agreed that in order to develop the vast natural resources of Northern Alberta, the Northwest Territories and adjacent areas, rail transportation connecting these areas with our trans-continental systems is necessary. We do not think that any one of us here today will deny the truth of this statement. Our single problem, then, and one on which it may be more difficult for us to reach any substantial measure of agreement, is to determine what route that rail connection should follow.

The Royal Commission set up to study the problems connected with the development of the northern parts of our province of Alberta, in the report which was tabled in the Legislature during the 1958 session, listed on page 94 of their report, ten possible routes. The commissioner quickly disposed of eight of these routes as being impractical for various reasons which need not concern us at this time. The two routes which they considered worthy of recommending for further study were (a) from Grimshaw north to the Pine Point mineral deposits on the south shore of Great Slave Lake, and (b) the extension of the present Edmonton-Lac La Biche-McMurray-Waterways line of the Northern Alberta Railway along the course of the Athabasca River to the same mineral deposits on the south shore of Great Slave Lake. Most of the controversy over the selection of one of these alternative routes has arisen between the proponents of one or the other of these two routes.





It should not be surprising that an intense spirit of rivalry has grown up between those who champion one or the other of these two routes, with the champions of each bravely and loudly singing the virtues of the route which would offer immediate and obvious advantages to their own particular area -- and to themselves. This is a perfectly natural and healthy display of the right to difference and debate which characterizes our democratic way of life.

However, there is a grave danger that we may, in blindly following the gleaming signal lamp of self-interest end up by doing not only ourselves, but the entire country in which we are interested irreparable harm. Governments have always shown themselves reluctant to reach decisions involving the spending of vast sums of money which are inhabited by relatively few voters and represented by pitifully few legislative representatives or members of parliament. Therefore, we suggest to you, with these facts in mind, that our regional rivalries, no matter how sincerely held or well intended, may be used by the authorities responsible as an excuse for delaying these decisions which could have such an important impact on the immediate development of the north and the long-term prosperity and health of the entire Canadian economy.

That is why a decision by this group made up chiefly of men who have no personal or immediate or section interest in any particular group and which





therefore can bring unprejudiced and statesmanlike minds to bear upon the problem is of such importance. You whose hope to benefit depends on the degree of benefit which either route can bring to our total economy are more apt to be able to reach the best possible decision, than those who are swayed by sectional or partisan interest. An overwhelming endorsement of one of these routes by this body would relieve our government of the necessity of making this kind of important decision.

Therefore, our plea to you -- even though we may seem to favour one route more than another -- is that we, each and everyone of us, should try to put aside all of our selfish personal desires, divorce ourselves from sectional rivalries and petty jealousies, and try to keep in mind that our responsibility is to reach an impartial decision -- a decision intended to bring the greatest and widest possible benefits in return for the expenditure of least necessary amounts of public money.

It is natural that those who live in the northwest quarter of our province would favour the route from Grimshaw and that those of us who live in the northeast quarter should favour the route from McMurray. We have no doubt that eventually railways will serve both routes. But our immediate task is to decide which route ought to be built first.

Both routes will serve the mineral deposits at Pine Point -- and if that were the only factor to be considered it would be very difficult to choose between





them. But that is not the only factor to be considered, important though it may be. It does not help us to make the important decision which must be reached.

The other factors which must be considered are:

1. What benefits will a railway bestow upon existing communities, how many people will be affected by it, and how will they be affected?

2. How long will those benefits last and what will be their effect on the long-term economy of our country.

3. What new developments can be expected as a normal result flowing from the selection of each particular route and what will be the long-term effects of such development on the growth of Alberta communities and the Canadian economy as a whole.

To properly consider these points it is necessary to divide the benefits into two classes:

(1) those of short-term duration, such as the expenditures made by those engaged in the construction of the railway, and (2) those of long-term duration such as the development of new areas and communities, the growth of these and existing communities, and the establishment of new businesses and industries, and the general development and utilization of our vast reserves of natural resources.

With modern construction techniques the benefits to be derived directly from the construction work itself should be of relatively short duration.





Communities along the right-of-way will experience periods of periodic boom. No doubt merchants, restaurants, hotel and rooming house operators, trailer camp operators, theatres, and other business which cater to the needs of the construction workers will enjoy periods of prosperity which will probably be painfully brief. Due to the short time the workers will remain in any one community existing facilities will be taxed beyond the bursting point -- but the short term nature of this prosperity will hardly justify the expenditures necessary to greatly expand present facilities.

And with this bursting activity which will bring prosperity to a fortunate few we may expect social problems and expense in connection with such services as police protection and school facilities for the children of the travelling workmen.

In other words, as far as the communities involved, considered as a whole, are concerned the disadvantages may well outweigh the short-term advantages. This has been the experience of most communities which have experienced such temporary booms.

The route through Grimshaw will provide rail service to a fertile agricultural area, which is presently served by a highway which is scheduled for improvement in any event. This might be expected to hasten settlement of these important reserve agricultural areas. But at a time when our problem is to find markets for existing surpluses, at a time when





agriculture is facing a crisis in all parts of this continent, at a time when there is serious discussion of a revolution in agriculture, these possible benefits may be more visionary than practical. This is a treed prairie area but some fairly important mineral deposits have been located and it is only fair to mention these.

Assuming that the McMurray route is adopted -- this railway will tap the rich Precambrian Shield which is the source of Canada's vast and as yet un-exploited mineral wealth.

The way will be opened up for the establishing of vast new lumbering and pulpwood operations in areas which would otherwise be economically and physically unaccessible.

The ready availability of hydro power estimated at some 9 billion K.W.H. per year is practically all located on the Athabasca-Slave and Clear Water Rivers.

Almost all of the commercial fishing is found in the central and eastern portion of Northern Alberta.

All of the Athabasca oil sands (300 billion barrels worth) and last but not least one of our most important resources -- water -- is practically all located in our northeastern section and when we realize that one ton of steel requires 32 tons of water and that one barrel of oil requires 18 barrels in its manufacture then it is evident that this railway will indeed be a two-way funnel which will open up markets of which our capital





city of Edmonton will be the natural gateway and will facilitate the development of our rich mineral resources. It will enable us to tap not only the wealth of our northern area but the wealth of the northern half of our sister province of Saskatchewan.

These are no fly-by-night benefits, not booms that will burst as quickly as they mushroom with unhealthy and quickly disintegrating growth. These are the foundations on which economic growth can be securely anchored. These are not economic shots in the arm given to an ailing country to provide temporary jobs for transient unemployed. The jobs and development and opportunities of which we are speaking are the solid industries which provide permanent jobs which will enable our people to put down roots, raise their families and build their homes. The kind of development which will not only enable a man to feed his family at his own table, but will provide growing opportunities for the children of an expanding population.

When one examines all of the factors it is impossible to fairly come to any conclusion other than the one that the route through McMurray is the only practical present route. It will bring the maximum benefits to the Canadian people as a whole.

In conclusion, let us quote from the report of the Royal Commission on Northern Development, a commission of able men who brought their impartial wisdom to grips with this problem. You will find these words on





pages 94 and 95 of their report.

"Assuming then, that the McMurray route is adopted, the railway would serve as the supply route for Uranium City and the points now served by water transportation via Lake Athabasca. Looked at from a natural viewpoint such a railway must provide access to Uranium City, which is one of the fastest growing areas and is expected to triple in population within the next few years. The railway crossing Peace River at Peace Point will give access to Uranium City by water transport down the easily navigable Peace River. As well as that, if, as is recommended by this Commission, a highway is built from High Level via Fort Vermilion and continued east to meet proposed highway which is under construction in the Wood Buffalo Park, this main east and west highway will before long be continued east to Uranium City. This mining area will then have access to the railway by highway along the north side of Lake Athabasca as well as having access by water transport. It would also provide a north and south route transportation some 100 miles from the Saskatchewan border just as the Mackenzie highway runs north and south a similar distance from the British Columbia border. No point in Northern Alberta would then be more than 100 miles from either a railway or the Mackenzie highway. A railway in this location would provide access to the large gypsum deposit at Peace Point, on the Peace River, and what is far more important, would provide a means of opening up Alberta's





Precambrian and Paleozoic areas for prospecting and development. It would also open up some timber areas which, due to increased accessibility, would be more readily developed, and, finally, it would pass by the Athabasca oil sands developments at Mildred Lake.

From the standpoint of the province as a whole, if the railroad is built from McMurray it will provide a route of transportation which will serve the east half of Northern Alberta while the Mackenzie Highway serves the west half. Such a railroad would make it possible to open up and develop all the north-east quarter of Alberta in a way which has never been possible before. While the building of a railroad from McMurray will be a great disappointment to the people in the Manning area, nevertheless it appears to the Commission that considering the good of the Province as a whole, the most good will come by a railroad from McMurray. This does not preclude the possibility that a railway may some day be extended to Manning when increased settlement and increased activity in the oil and timber industries lead to sufficient increase in populations and amount of freight in sight to warrant its construction.

A railway to Pine Point is a necessity. It is of great economic importance to Alberta, as well as to the Dominion of Canada. The route chosen should be that from McMurray north, as in that location it will be of greater service and value than if built along any





other route.

THE CHAIRMAN: Are there any questions you would like to ask, Mr. Feehan?

MR. FEEHAN: No.

MR. FOUKS: I have no questions.

THE CHAIRMAN: I have one I would like to ask which deals with the question of agricultural possibilities.

Your town is just about at the north edge of agricultural development in that part of the country, is it not?

MR. MACCAGNO: At the present time I would say yes. There is a large area about forty or fifty miles north called the Wandering River area and if you look at the McGregor Report there are several thousand acres more of good agricultural land in that area. Perhaps it might be interesting for you to know that fifty miles south of Lac la Biche always ranks as first, second and third in grain deliveries. They grow over a million bushels a year there.

THE CHAIRMAN: Would you say there is a good deal of good agricultural land that is available north of where farming is now being carried on?

MR. MACCAGNO: Yes, there is. There is a section in the Pea Vine prairie area which is totally undeveloped where there is very good land and today with agriculture in the process of price and everything else, the farmers themselves are having great





difficulty in marketing their grains. They are all on permits. The cost of machinery in developing an area such as ours makes it quite difficult to go ahead and open new farms without credit. Of course, that will involve a lot of argument.

To answer your question directly, there is a large area of undeveloped land which would be very good for cultivation in the Lac la Biche area.

THE CHAIRMAN: How large an area would you estimate?

MR. MACCAGNO: Well, you have caught me off base, but I can get it in the book if you like, because it is in the book.

THE CHAIRMAN: You would agree with the McGregor Report?

MR. MACCAGNO: Yes, I would.

THE CHAIRMAN: Very well, we have that.

MR. MACCAGNO: Yes, it is in there.

THE CHAIRMAN: We will adjourn now until two o'clock.

---Luncheon adjournment.





---Upon resuming at 2.00 p.m.

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SUBMISSION OF  
THE COMMISSIONER OF THE  
NORTHWEST TERRITORIES

Appearances:

Mr. W. G. Brown

Deputy Commissioner of the  
Northwest Territories

Dr. J. Jenness

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THE CHAIRMAN: Mr. Brown, you are representing the Commissioner of the Northwest Territories and I believe you are the Deputy Commissioner, are you not?

MR. BROWN: Yes, I am.

THE CHAIRMAN: You have with you Dr. Jenness from the Department of Northern Affairs?

MR. BROWN: That is right, sir.

THE CHAIRMAN: We will be glad to have you present your brief and any part you would like Dr. Jenness to take in then of course we will be delighted to hear from him also.

MR. BROWN: Thank you, sir.

THE CHAIRMAN: Will you read it from where you are or from the witness stand?

MR. BROWN: I think I prefer it here.

THE CHAIRMAN: That is fine. Most of those presenting briefs have done it from the council table.





MR. BROWN: May I proceed?

THE CHAIRMAN: Yes. Feel free to elaborate on it wherever you see fit.

MR. BROWN: Thank you. My first words, Mr. Chairman and Commissioners, are ones of regret on behalf of Mr. Gordon Robertson, the Commissioner, for his inability to be here and present this brief according to his intention to do so. He has asked me to be here today on his behalf to present the brief for him.

In November, 1955, as Commissioner of the Northwest Territories, I submitted a brief to the Royal Commission on Canada's Economic Prospects which dealt with the future economic development of the Northwest Territories. The brief included a strong argument in favour of the construction of a railway into the Territories. (Annex "A" to the Report). This line would have a two-fold usefulness: first, it would foster Canadian unity -- as did the building of the C.P.R. across the prairies in the 1860's -- by providing a rail connection between a frontier region and the more settled parts of the country.

I think in this connection the interpretation of "Canadian unity" as referred to and in the context of this particular paragraph refers more to unity in an economic sense of bringing the resources of the Territories into the general economic life of Canada.

Second, it would contribute towards the development of this region which has been severely handicapped, and in some cases retarded by high transportation





costs.

In the 1955 brief, I put forward the case for the construction of a railway, and not the case for any particular location. While reference was made to Grimshaw as a possible terminus, engineering studies had not then been made, and much was still not known about the extent and character of resources along the several routes which might be considered. Even without this knowledge I felt justified in proposing a railway -- by whatever route -- because of the profound effects which it would have upon the economic development of the Mackenzie District, N.W.T., and of Canada. A paragraph from the brief makes this point clear:

"A railway to Great Slave Lake will not be just another railway. It is not a railway to a lake, or to open a mine or to serve a community. "A railway to Great Slave Lake will be one of the great development railroads of the country. It will not bring population to the Northwest Territories to the same extent that the western railroads brought it to the prairies, but it may well bring in the years ahead a comparable increase in the wealth of Canada. This railway is quite different from most of the branch lines constructed in recent years which were destined to serve one mine, or a group of mines; its purpose is to open up a whole new region. "The fact that there happens to be a potential





"mine of great value at its northern terminus  
"is a piece of great good fortune, for it will  
"enable this railroad to be built without the  
"long wait for reasonable returns which so  
"often has been the lot of a pioneer railroad."

THE CHAIRMAN: Do you mind if I interrupt for a moment? At the time this brief was submitted to the Gordon Commission and the Grimshaw route was suggested as a possible terminus, was anything else considered at that time?

MR. BROWN: As far as I am aware, Mr. Chairman, little or no consideration was actually given to any particular route. I think Grimshaw was considered at that time as a terminus for the discussions the brief was based on.

THE CHAIRMAN: Was it used by way of illustration only or could you say it was suggested that Grimshaw would be a satisfactory terminus without suggesting that it is the only one or the best of several?

MR. BROWN: I cannot say for sure what the thinking of the Commissioner was at that time. I would assume, however, that the thinking at that time was probably that Grimshaw was a satisfactory terminus because I do not think any consideration had been given to alternate routes or any studies made. Therefore, it was probably based on the assumption it was satisfactory not having any indication or ideas otherwise.





THE CHAIRMAN: There was no reason for considering alternate routes then, was there?

MR. BROWN: I think that is probably correct. Mr. Jenness may be able to add something to that.

THE CHAIRMAN: Can you, Mr. Jenness?

MR. JENNESS: Yes. In 1955 the Commissioner was most anxious to have a railroad built into the north. There had been at that time no engineering studies made, no economic evaluation made as to any particular route. It was simply taken for granted simply because of the existing settlement in the Peace River area and its obvious attractiveness agriculturally his suggestion that it might be a logical starting point. Since that time the Commissioner of the Territories has asked his Department, that is the Department of Northern Affairs -- he wears two hats; he is also the Deputy Minister of the Department -- to undertake studies evaluating route possibilities. Eight separate routes were actually analysed by members of the department using outside sources of information as necessary. That is all since 1955. Those eight studies included routes originating in British Columbia and Saskatchewan in addition to routes originating in Alberta. It is on the basis of those studies largely that Mr. Robertson as Deputy Minister and Mr. Robertson as Commissioner has come to the conclusion that the railroad should be built from one or other of two alternative points in Northern Alberta and has evaluated the





merits of both routes along the lines incorporated in this brief.

THE CHAIRMAN: Thank you.

MR. BROWN: There is accordingly a great deal of gratification in the Northwest Territories with the announced decision of the present federal government to proceed with the railway. Whether its southern terminus is at Grimshaw or at Waterways, it will bring a mine into production at Pine Point which, even in its early stages, will increase the gross national product by approximately \$25 million. It will supplement existing transportation routes to Great Slave Lake, thereby stimulating exploration and the prospect of development throughout the whole Mackenzie District. It will reduce freight costs to destinations on and north of Great Slave Lake. It will permit a substantial speed-up in the time of travel from railhead to the mouth of the Mackenzie River, and it will contribute to the reliability of freight deliveries at all northern points served by the Mackenzie route -- including outposts of defence on the DEW Line. In short, the railway is an essential prerequisite to the optimum development of this area which has a great deal to contribute to the future strength and prosperity of Canada. It is clearly in the interests of the Territories that it come into operation as soon as possible.





### Territorial concern with the route

The route of the railway south of 60° is perhaps of less immediate concern to the Northwest Territories than the fact of the railway. In the broad view, however, its location is of fundamental importance on at least three grounds:

- (a) The frequency and standard of service which the railway can provide will depend on its traffic density and economic soundness. This in turn will be determined, at least in part, by the traffic originating in the area through which it passes.
- (b) It must be recognized that funds available for public investment in the North are limited. The Territorial interest -- and the national interest -- clearly require that the railway become self-supporting as soon as possible, so that funds may be released for other urgent uses.
- (c) If the railway is to be of maximum benefit to the Territories, it is important that it complement, as far as possible, other transportation facilities which will continue to serve the Mackenzie District.

In summary, therefore, it is very much in the interest of the Northwest Territories that the railway be so planned and constructed that it can develop rapidly into an enterprise as productive as





possible, economically sound, and integrated with other existing and potential transport and industrial enterprises in the area which it serves. Since much of its route will be south of the Territorial border, I do not feel it appropriate for me, as Commissioner, to propose to you a specific route. I would however suggest a number of considerations which may be of assistance to you in settling upon a route which, inter alia, will meet the needs of the Territories for economic and efficient rail service.

Most Traffic will arise from Physical Resource Development

The Northwest Territories is a very under-developed part of Canada. It is only by expanding the utilization of the available resources that its economy can be strengthened and its administrative maturity developed. For this reason, therefore, the Commission will no doubt wish to consider which route offers the greatest prospect of immediate, early and long-term resource development.

Resources can be either human or physical. In the north, the former will provide the labour force for industry and a small consumer market for locally produced and imported goods. The population in the northern part of Alberta and the Mackenzie District, with alternative means of transportation at its disposal, cannot now and may never provide sufficient passenger traffic to justify the building of a rail-road by any route for its carriage. It is doubtful





whether any substantial weight should be given to the present or future population of the area as passengers for a railway. Other means of transportation are likely to be used predominantly, and neither the revenue return from passengers nor the marginal convenience of people who might occasionally be passengers appear to be major factors.

The availability and use potential of the physical resources thus appear to be the primary considerations which should govern the selection of route.

The following physical resources have been analyzed, and are listed here in their apparent order of importance:

- (a) mining and mineral products
- (b) forestry and forest products
- (c) agriculture and agricultural products
- (d) petroleum and natural gas
- (e) water resources and hydro power
- (f) fishing and fish products

In considering the development prospects of these resources, considerable reliance has been placed on professional assessments prepared by those federal government departments best placed to provide a technical judgment of specific fields of economic activity. These papers, prepared by the Department of Mines and Technical Surveys, the Forestry Branch of the Department of Northern Affairs and National Resources, and the Department of Agriculture, are submitted for





the information of the Commission as Annexes B, C and D of this brief.

(a) Mining and Mineral Products (see also Annex "B")

The Grimshaw route to Great Slave Lake lies entirely within the Interior Plains geological province from whose sedimentary formations little mineral traffic can be expected for a railway. The route northward from Waterways traverses sedimentary country also, but -- by contrast with the Grimshaw route -- it provides ready access to potentially available metallic mineral deposits on the Canadian Shield, and thus offers the prospect of bulk traffic on a continuing basis for years to come.

The Pine Point lead-zinc deposits are the only immediately certain mineral traffic for the railway, and that traffic will accrue to it by either route. The known orebody here is about 60 million tons. It is capable of being exploited over a period of about 33 years, and of providing the railway with a probable 215,000 tons bulk freight traffic annually. To this can be added the northbound movement of about 25,000 tons of mine supplies and an unspecified but continuing quantity of supplies for mine workers and for the town-site that will be erected near the mine.

Ignoring existing and possible mineral production north of Great Slave Lake which could be shipped by either route, the only other mineral traffic purportedly in sight on the Grimshaw route is iron ore





or iron concentrate from a known deposit in the Clear Hills, near Hines Creek in the Peace River District. Even if this deposit were ultimately to prove of commercial value, it would not, in all probability, provide substantial traffic for the Great Slave Lake railway, since the Clear Hills are located within spur line access of the existing Northern Alberta railroad, and any iron ore shipped might be expected to move southbound on it and not on the proposed new line.

The outlook for the Waterways route is considerably more promising. If, as seems probable, lower costs could be provided by a railroad on this route, traffic now moving on the Athabasca River to and from existing mining operations on Lake Athabasca would accrue to the railroad. Using current figures, about 2,200 tons of uranium precipitates move southward from Lake Athabasca, and an additional 100,000 to 120,000 tons of supplies, equipment, fuel, etc. move north to the mining camps. All of this northbound freight and some of the southbound uranium would move over 225 miles of the new railroad between Waterways and the proposed rail-water transshipment point at Peace Point.



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While this is not new traffic, it nevertheless is traffic whose haulage costs would probably be lower on the railroad than they are at present on the Athabasca River, and both suppliers and receivers in mining operations of freight would benefit from these lowered costs. Substantial economies would also result from the lower inventories which railway service would permit.

THE CHAIRMAN: Would you pause there for a moment, Mr. Brown? We had this discussion yesterday with two gentlemen from Uranium City, on the question of what advantages there might be with regard to the railroad going up by Waterways, or the side of Lake Athabasca, and what freight advantages they would get from a railroad there. These were Mr. Campbell and Mr. McMeekan. They were not in a position to give us much detailed information. I am wondering if you can tell us how the freight would go and what specific savings there might be?

MR. BROWN: There are two factors that I can mention, sir, with regard to that point. One is that the present route from Waterways to the Athabasca River, as you have probably been told and are aware, is a difficult stretch of river due largely to low water levels, particularly in the fall and normally after summer, around the middle of August, and this does result in a lowering of the amount of freight that can be taken by barge. I think it is limited to approximately 50





per cent of normal barge capacities...

THE CHAIRMAN: That was the figure given to us yesterday.

MR. BROWN: ...at low water time. That does have some bearing on the cost. It also has some bearing on the reliability of receiving shipments, and I think on a number of occasions the N.T. Company has found it extremely difficult, if not impossible, to move all of the freight before freeze-up because of low water conditions.

There is, therefore, a precariousness about the delivery, and that requires, in some respects a supply of provisions earlier in the year than it should be necessary because of the levels related to the end of navigation season. These conditions of good water supply and open navigation would pertain from Peace River on the Peace River, and the low water problem, as I understand it, would not arise, and deliveries could, therefore, be brought later and you would have greater assurance of delivery.

These, I think, are the two main points.

THE CHAIRMAN: You have no specific figure - nothing in detail? That is, perhaps, something we could get from Northern Transportation, but if there is anything you could help us with in this regard we would be pleased to have it.

MR. BROWN: I don't think I have any specific information, Mr. Chairman.





THE CHAIRMAN: I gather, Dr. Jenness, you have nothing?

MR. JENNESS: We have a very little bit about rates, although we are a secondary source of information on rates, for the simple reason that they are determined, in the first instance, by the railroads, the water-shippers and the Board of Transport Commissioners.

If there is any particular question on rates on which I can be helpful I would be prepared to do it, but it might be better if I made a statement about the whole situation rather than on this one subject where we have less information.

THE CHAIRMAN: Let me put to you the problem we were discussing yesterday. The situation now is that freight goes in by water a distance of approximately 250 miles. Now, if it is going to go via Peace Point it would have that rail route to cover and the fairly substantial distance from Peace Point to Uranium City.

We have been wondering whether there would be a saving or whether the only advantage <sup>is</sup> / the reliability of delivery.

MR. JENNESS: May I answer that?

MR. BROWN: Yes.

MR. JENNESS: Our impression is that there would actually be a saving. The distance involved is greater with the railroad at Peace Point and water shipping across to Lake Athabasca than it is at present by





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the all-water route from Waterways to Lake Athabasca.

Consequently, it all depends upon the point of origin of your goods. If you were going to originate at Waterways that extra distance looms extremely large, and I would be the first to admit that, undoubtedly, your rail-water rates with that starting point would be higher than the present water rates by themselves. On the other hand, when you consider that the majority of goods -- perhaps virtually all of the goods -- going to Lake Athabasca originate at points such as Edmonton and even eastern and western Canada, the rates on rail haulage tend to disappear in the sense that you are talking about through rates from Vancouver or Edmonton or from Toronto.

Taking a specific rate, we feel it would be more if you were starting only at Waterways. The rates are based on a ton mile basis and, in general, the longer the haulage the lower the rate; so that on those long hauls you would get a lower railway rate than you would expect to get starting at Waterways.

The other factor is that it is the Athabasca River portion of the Northern Transportation Company's operation in the north -- actually, there is one other portion and that is not relevant to the Lake Athabasca story, but it is the portion where they have the 16 miles portage from Fort Fitzgerald to Fort Smith. These two things -- the Athabasca River portion and this other -- are the two factors contributing to the





higher rates via the Northern Transportation Company on its services south from Great Slave Lake than they charge on their services from Great Slave Lake northwards.

In other words, what the railway would be doing would be eliminating a high-cost element in the operations of Northern Transportation and replacing it with an operation starting at Peace Point, where the rates should be no higher than they are at present; and, presumably, lower. I cannot speak for the Northern Transportation Company, and I don't know that they will be lower. We are making the assumption in our department that they will at least not be higher from Peace Point than they are currently from Waterways, and that the long haul on the railroads -- the long haul rates -- will tend to make the total shipment to points on Lake Athabasca from no more expensive than at present at the worst to several dollars per ton cheaper.

We don't have specific figures, because the whole thing is really based on "guesstimates" at this time. We don't have anything we can base rates on because they have never been put in to the Board of Transport Commissioners; and we don't have rates on the stretch of railway that would be built north of Waterways, because there is nothing, again, on which to base a rate; so everything has to be determined on the basis of certain assumptions. We have made the assumption that the water rate from Peace Point would





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not be greater than it is at present, and we think it conceivably could be less; and that the rail rate -- that is, the long-distance haulage involved -- would be such that the total rate to Lake Athabasca could, in fact, be less expensive than at present and would not be more expensive.

COMMISSIONER GAINER: Just dealing with that last point, I would like to inquire further about it. Does it seem reasonable to expect, on goods moving from Edmonton even to Waterways and, let us say, to Peace Point, that an additional 50 per cent more rail haul could be done for less than the water rate on the last 100 or 125 miles?

MR. JENNESS: I don't know. We are viewing it on the basis that it would be less. I am not sure of myself because I am not at all sure that the rates will be less. I see no evidence to indicate why they should be higher so long as you are starting as far away as Edmonton; and the more traffic the more likelihood they would be better.

COMMISSIONER GAINER: I was wondering if that would be the case, even if we did admit -- we don't know what the actual rates would be, but on the same kind of mileage basis as from Edmonton to Waterways, we will say, just extending that the additional 125 miles, or whatever it is, it would seem to me dubious, perhaps, that it would come out to something less than from Edmonton to Waterways or Waterways to Peace Point.





MR. JENNESS: I think it is going to be sufficiently close that one argument as opposed to the opposite argument will tend to stand or fall on exactly how many miles you are talking about of water haulage.

If you take just destinations from Peace River the route which we believe the water-shippers would follow, namely, the route from Peace Point through Quatre Fourches River to Lake Mamawi to Chipewyan and then on to destinations at Lake Athabasca -- this is 35 miles shorter than the other route that might be considered, and talking in terms of total distance as between Peace Point at one end and Bushell at the other end it would come to about 168 miles as against the figure of 203 miles if they took the longer route; and on that basis I don't have actual statistics with me, I am afraid; I didn't expect to get into detailed questions of rates, because, after all, we are not a primary authority; but on that basis some calculations have been worked out which indicate that if you take that longer distance -- 203 miles -- you might come out with a figure slightly higher than current rates. If you take the 168 miles, which, we think, the Northern Transportation Company would follow, you come out with something less than the current cost.

COMMISSIONER GAINER: That is, perhaps, what I should have asked. I agree that we will have to go into that. But have you worked out some numerical figures with regard to freight rates to show





what the relationship is between Waterways and Peace Point?

MR. JENNESS: On that particular service I don't have any specific figures. I do have figures for the service to Yellowknife and destinations further down the river, which are specifically relevant to the Northwest Territories Commissioner's brief.

COMMISSIONER GAINER: All right.

MR. JENNESS: The others I don't have with me.

COMMISSIONER GAINER: Those will come up later.

MR. JENNESS: I have been talking a little bit at a loss without having the facts in front of me.

MR. FEEHAN: I am not sure I understand the doctor's proposition and I would like to ask him about a specific example. Would a 10-ton caterpillar tractor, let us say, be shipped by rail to Peace Point as cheaply as it would be presently to McMurray -- from Edmonton, that is?

MR. JENNESS: We haven't been talking on that subject at all, but the answer to that question, I think, is certainly a No. But if you are talking about a shipment intended to end up on Lake Athabasca, which is what I understood we were talking about...

MR. FEEHAN: Yes.

MR. JENNESS: ...and you computed a rate from Edmonton to Peace Point, which would be your railway section, and then you would have a separate rate by the water from Peace Point to Athabasca, and you added these two together that will not come, under any





circumstances that we can foresee, more expensive than to ship it now by rail to Waterways at one rate and by Northern Transportation Company's barge from Waterways up the Athabasca River to Lake Athabasca at another rate. Adding those two rates together we would anticipate -- I shouldn't say "anticipate," because we can't be sure of that -- but we would like to see, and we would try to see, that the rates would be, if anything, lower. We can't foresee anything higher. But if you are to have your point of destination Peace Point and you are asking me if shipping from Edmonton to Peace Point is cheaper than Edmonton to Waterways, then, the answer is going to be No.

COMMISSIONER GAINER: Perhaps we should clarify this. We have had occasion to discuss it several times. It might, in fact, almost end up that if the distance from, say -- the water distance -- from Peace Point to Uranium City and the water distance from Waterways to Uranium City was only 50 miles of a difference -- would that be right? -- Or, at least, this was suggested in evidence several times -- then, you wouldn't expect that there would be too much difference in the cost of shipping by water either from Peace Point to Uranium City or Waterways; so that would mean that it would come out that the total of the road rate from Edmonton to Peace would have to be not much greater -- the total cost not much greater -- than Edmonton to Waterways?





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MR. JENNESS: I think we have got down now to a point where no one other than the railroads can give you the answer; but I feel it will vary from commodity to commodity. You might find with some that your rate to Peace Point was very little different than the present rate to Waterways, whereas on another it might be appreciably higher. If you are talking of individual commodities you may get higher rates by the railroad than on others.

COMMISSIONER GAINER: I have no intention of bringing you further than the figures you have here, because we certainly should get the railroad to provide this information. Our only interest is to get some numerical examples.

MR. JENNESS: The only numerical examples I have with me relate to the Northwest Territories.

COMMISSIONER GAINER: And these will come out later?

MR. JENNESS: If you like, yes.





COMMISSIONER THOMPSON: You mentioned raising the channel of the four forks. When you can't get down at the mouth of the Athabasca River, can you navigate in the channel of the four forks there when the Peace River stops running from the Athabasca?

MR. JENNESS: We have been led to believe that the answer is yes, sir. For the specific answer you would have to ask the Northern Transportation people.

COMMISSIONER THOMPSON: I am not sure if you can't use that channel in the fall when the water is low. If the Peace kept running into the Athabasca it wouldn't be so. I didn't think it was so late in the fall. According to the gentleman yesterday, it was late in the fall.

MR. JENNESS: Well, we did not, for the purpose of this brief, really think it would be necessary to come armed with specific answers relative to the area south of latitude 60, which is the southern limit of our responsibility. All I can say is that to our knowledge there will be no impairment on a rate basis to people in Lake Athabasca from the changeover from waterways to rail shipment to Peace Point, if that is the way the railroad goes.

THE CHAIRMAN: I hope you don't mind these interruptions as we go along, Mr. Brown. If it is disturbing you we would be glad to leave them till later.

MR. BROWN: No, sir, I don't mind.





THE CHAIRMAN: If you don't mind, we ask these questions as they come to us.

You are now down to the bottom of page 7 of your brief?

MR. BROWN: Yes, sir.

New mineral and related mining traffic from the Northwest Territories is also potentially available to the Waterways route. Since 1958, about 400 new mining claims have been recorded within an area located 50 to 70 miles northeast of Fort Smith. Significant nickel and copper occurrences are indicated in this area. Findings to date have been very good, and within the next year, perhaps, it will be known whether these deposits are susceptible to economic development, or otherwise. Studies conducted in conjunction with the Department of Mines and Technical Surveys indicate that the prospects for mineral development in the area north and east of Fort Smith are so good that plans are underway which will lead to the construction of a development road through the area. This road would connect with a railway from Waterways just west of Fort Smith. A railway by this route will obviously lower costs and hence aid development in the area, while such developments as do occur will provide additional traffic and revenue. Additionally, if restrictions on mining in any of the area now comprising Wood Buffalo Park are lifted, an available gypsum deposit near Peace Point can be brought into production.





THE CHAIRMAN: Mr. Brown, I would like to ask you a few questions here. You referred to the nickel and copper occurrences. I presume you are referring to the same thing we discussed on several other occasions, and that is those of the Snowdrift Company, the Hershorn interests, some distance north of Fort Smith?

MR. JENNESS: That is correct, sir.

THE CHAIRMAN: So far we haven't been able to get anything specific about those. Can you give us anything more definite than you have in the brief?

MR. JENNESS: No, I am afraid I cannot give you anything more specific at this time. There is really nothing more specific can be given at this time. We have talked on a continuing basis with our Mines and Technical Surveys people who are following the developments very closely, and there have been surface findings; they appear to be quite attractive. The geological findings appear to be also potentially conducive to having more mineralization there than appears at the surface. Beyond that, the Hirshorn Company itself has done a little bit of work, but they are still at the preliminary stage and there isn't any factual information on it to really warrant going further than we have in the brief.

The one comment I would like to make is that at least where you have your Sheild formations you do have potential metallic minerals, whereas out in sedimentary country, apart from the possibilities





along the contact zone where the sediments and the Shield come together, you don't have prospects of metallic minerals at all. You might find another Pine Point situation, probably on a smaller scale somewhere about the Shield, but not on it, not 150 miles away.

THE CHAIRMAN: Dr. Riley presented a brief on behalf of the Chamber of Mines and he expressed surprise at this information. He said he had been watching exploration very carefully and he had not heard of this discovery and it surprised him that he would not have heard of it if it was of great significance.

MR. JENNESS: Well, the discovery is personally known to our Mines and Technical Surveys people, because they mention it in one of the appendices attached to this brief.

THE CHAIRMAN: We are really interested to know what information there is about it. Somebody who mentioned it, I think yesterday -- I think it was Mr. Brintnell -- he told us that there was 2 per cent copper, 2 per cent nickel, plus something else, but he was unable -- he said he knew nothing about widths or lengths. I suppose you know nothing about it?

MR. JENNESS: No, we don't know. They just made the discovery last year.

THE CHAIRMAN: There has been no diamond drilling that you know?

MR. JENNESS: I recall none, sir.

THE CHAIRMAN: Do you know whether there has





been much survey work done, much sampling?

MR. JENNESS: It is a very preliminary kind of look-see. It is one of the things where I would say that the geological structure looks favourable; they have discovered outcroppings, not sufficient to determine on the basis of explorations yet whether they have an orebody or the potentialities of an orebody there, but enough to excite their interest that they certainly plan to keep on, and we should know very definitely whether they will find something significant or not.

THE CHAIRMAN: Do you know anything about the plan they have for exploration?

MR. JENNESS: The company's plan?

THE CHAIRMAN: Yes, whether they have set aside any money or let any contracts for drilling?

MR. JENNESS: Personally I don't know. This is the sort of thing I would phone up the people in Mines and Technical Surveys for. After all, I am supposed to be an economist and not a minerals geologist, and I don't have the answer with me today, I am sorry.

COMMISSIONER THOMPSON: Have you any idea when these claims were staked?

MR. JENNESS: 1958, and I don't know -- beyond that I am making a guess, because I don't know whether it was May or June, but somewhere around then. But I may be totally wrong.

COMMISSIONER THOMPSON: Are they working on





those claims now, do you know?

MR. JENNESS: To my knowledge they were working on them this year.

COMMISSIONER THOMPSON: Early in the spring, but are they working on them now?

MR. JENNESS: I don't know.

COMMISSIONER THOMPSON: You said something that you wouldn't expect to find deposits ---

MR. JENNESS: Metallics. I said I wouldn't expect to find them 150 miles away from the contact area.

COMMISSIONER THOMPSON: What about Pine Point? I would never say that Pine Point was a contact area. Wouldn't you find a point west of Hay River just as easily as east of Hay River? Is there any reason why you couldn't find a Pine Point west of Hay River as east of Hay River? The Precambrian Shield has nothing to do with the location of the outcrop at Pine Point, has it? -- or has it?

MR. JENNESS: Not being a geologist, all I know is that to my knowledge it is nearly as rare to find metallic minerals in areas of sedimentary structures as it is to find oil and gas in the Precambrian Shield. But I am not a geologist.

COMMISSIONER THOMPSON: You wouldn't expect to find metallic minerals to the west?

MR. JENNESS: To my knowledge, no one has been looking for them further west.

COMMISSIONER THOMPSON: Of course, there are





no outcrops to look, but they have found the Macdonald Sault west, it extends away far west of the Great Slave Lake, and I am just wondering how you make that statement that you wouldn't expect to find metallic minerals 100 miles to the west.

THE CHAIRMAN: I think Mr. Jenness has answered the question. Any other questions?

Now, that deals with the mining and mineral products. Would you like to read Index B now, or would you like to go on to the annexes afterwards?

MR. BROWN: I wasn't planning on actually reading the annexes at all, Mr. Chairman, unless you wish.

THE CHAIRMAN: All right. Would you go on with the next section, Forestry and Forest Products?

MR. BROWN:

(b) Forestry and Forest Products (see also Annex "C")

The Grimshaw and Waterways routes both pass through predominantly tree-covered terrain. In each case, less than one-half of the total accessible forest is capable of supporting woods operations. The productive forest that would be served by the Grimshaw route is 9,608,028 acres or 39 per cent of the total area. Along the Waterways route, the productive area is 6,584,343 acres or 36 per cent of the total area -- plus merchantable forest in Wood Buffalo Park. The stands of timber in the National Park are good enough that, even with the limitations of cutting to mature and over-mature timber, and other restrictions





under the National Parks Timber Regulations, they are already supporting two lumbering companies whose output can be shipped competitively to markets as far distant as eastern Canada.

Along both routes, however, the productive forests are rather marginal for forest operations in the sense that both areas are remote from potential markets. Thus, physical capability of supporting production is not alone indicative that these forests can become economically productive. In this context, I would call your attention to the findings of the Royal Commission on the Development of Northern Alberta that within the next thirty years there will not likely be sufficient demand for lumber or plywood products to utilize all of the forest resources of northern Alberta; it seems likely that areas at present supporting lumbering operations will be more susceptible than other areas to being developed to full capacity.

In this connection it is probably significant that no large-scale woods operations are being carried out at the present time in forested areas on the Grimshaw route whereas two companies are both currently in operation on the Waterways route. The woods operations would provide a railway which follows the Waterways route with an immediate source of freight traffic. The allowable cut of timber in Wood Buffalo National Park is estimated at about 50 million feet b.m. annually; this would represent





traffic of at least 50,000 tons a year for the new line.

The forest operations will also produce other railroad freight. Most supplies needed at the sawmill and at the contemplated plywood plant will move north-bound to these plants by rail. It is also possible that some of the logs and lumber being moved from the cutting areas to the plants will use rail haulage also. These two kinds of freight might reasonably amount in total to about 70,000 tons.

(c) Agriculture and Agricultural Products (see also Annex "D")

Agriculture and agricultural products are relevant only to the Grimshaw line. Although production of coarse grain, vegetables, etc., is possible within an area which would be tributary to a railroad between Waterways and Pine Point, no export of agricultural products from this area can be expected, hence no traffic or revenue for the railroad.

On the Grimshaw side, the railroad would follow the Peace River Valley which contains a considerable acreage of productive agricultural land. This land is capable of commercial utilization, principally, however, for the production of wheat and other grains. An estimated total of about 1,800,000 bushels of grain annually would be shipped on the southern portion of the new railway, to Grimshaw and thence to southern Canada. A further 200,000 bushels originating in the immediate Grimshaw area is omitted here as inapplicable, because it would not move on the new line.





On a tonnage basis, these anticipated grain shipments from the Peace River Valley appear to be quite substantial. However, they would provide the new railway with only a fraction of one per cent of its total revenue -- an amount no higher than about \$16,000 per year. The movement of grain is at present controlled by Statutory Grain Rates which probably will be left untouched by the McTague Royal Commission which is to inquire into and report upon problems relating to railway transportation in Canada.

Grains produced in and shipped from the Peace River Valley, unfortunately, seem most unlikely to contribute in any substantial manner towards the development of the area further north, i.e., in northermost Alberta or British Columbia or in the Northwest Territories.

There might be some shipment southward of cattle fed in the area. It would appear, however, that the competitive position of the area for the southern market would not be good, and hence no great development for that purpose seems likely -- nor any substantial freight movement.

Cattle raised in the area north of Grimshaw might be in an advantageous position to serve a market in the Mackenzie Valley. That is, however, not entirely certain as the location of packing plants would be equally relevant. On the most favourable assumptions, however, the extent of freight northbound from the area seems likely to be small, and the cost





advantage for consumers in the Territories is also likely to be small.

(d) Petroleum and Natural Gas (see also Annex "B")

Gas was discovered in 1955 in two wells near Tathlina Lake, west of Hay River, N.W.T., and during the past year there have been new and important gas finds at Kotcho Lake, on the Petitot river and elsewhere in northeasternmost British Columbia. None of these wells has yet been brought into production. Industry officials appear highly confident that investigations currently underway will prove additional substantial sources of gas -- and will perhaps discover oil -- within the general area where the boundaries of Alberta, British Columbia and the Northwest Territories intersect. The eastern part of this gas area would lie within the economic sphere of the proposed railway route from Grimshaw to Pine Point.

In the Waterways area the Richfield, Cities Service and Royalite group believe they have found an economic method of extracting oil from the Athabasca tar sands. These companies already have a pilot plant under construction near Mildred Lake, and they hope to be producing petroleum commercially within four to five years.

At first glance, therefore, it might appear as though petroleum traffic would contribute materially towards successful operation of a new railway on either the Grimshaw or the Waterways route. In practice,





however, petroleum industry explorations in both areas are significant from the point of view of northern economic development and because they may lead to substantial new resources and revenue for Canada, but they are essentially unrelated to the question of a route for the railway. Existing transportation facilities together with roads now under construction or in the course of planning are adequate to permit exploration. If production should subsequently develop, the railway still would not be necessary because oil and/or gas will be moved by pipeline, and equipment and supplies for drilling sites can be transported over the same roads which are now being used for exploration. On the Grimshaw side these shipments can be trucked on the Mackenzie Highway to any locality which would be served by the railway. There is no comparable trunk road paralleling the Waterways route and for this reason some freight may use the railway. Even if it does, however, only a few miles of railroad -- near Waterways -- will be involved.





I understand that a possible annual shipment of 16,000 tons of sulphur originating at Edmonton and destined in large part for the uranium processing operations near Lake Athabasca is also involved in Royalite Oil Company plans.

(e) Water Resources and Hydro Power

Two schemes for the harnessing of water and generation of power may have some bearing upon the railway question. One of these is the very large plan to harness the Peace River in the vicinity of Hudson Hope, B.C., and to generate up to 5,000,000 h.p. to serve the local area, adjacent portions of the Peace River District in Alberta, and the lower B.C. mainland. The other is a plan to develop hydro power on the Slave River between Fort Fitzgerald, Alberta, and Fort Smith, N.W.T. This would be, by comparison, a relatively modest but still substantial project capable of producing ultimately about 870,000 h.p. In the initial stages the power would go to the Cominco lead-zinc mine at Pine Point and probably to Uranium City and the immediate area.

The production of power near Fort Fitzgerald could result in a reduction of about 10,000 tons annually in the volume of freight (i.e., fuel for power) which the railway would carry northbound to the Pine Point mine and its townsite. The fact that the hydro plant would be located near the Waterways route is not relevant, because the reduction





in shipments would be experienced on both routes.

If the Wenner-Gren project materializes it would probably enhance the possibility of industrial growth in the Peace River District. This industry, however, would almost certainly locate in the already settled portions of the Peace River area -- i.e. south and west of Grimshaw. It thus would contribute no new freight to the proposed railroad, although it might provide some commodities which otherwise would be supplied from Edmonton or Vancouver.

Surprisingly, however, harnessing of the Peace River at Hudson Hope could contribute towards economic development in the Lake Athabasca area and simultaneously benefit a railway on the Waterways route. By damming the Peace River, its flow downstream would be regulated, hence facilitating water shipping on its lower stretches, including harbourage at Peace Point where freight destined for Lake Athabasca would be transshipped from the railway.

(f) Fishing and Fish Products

Fishing industry activity is concentrated on Great Slave Lake and the town of Hay River serves as the base of operations. Equipment and supplies needed by the industry and fish destined for markets move by truck, using the Mackenzie Highway.

By comparison with trucking on the highway, a railroad on either route would suffer from certain handling disadvantages, probably also from a schedule





disadvantage, making shipment by rail less attractive to the fishing companies than is their current method. Even with a railroad available, their southbound shipments (fish) probably will continue to move by truck, and most northbound return freight will also.

THE CHAIRMAN: Mr. Brown, have you been in touch with many of these fish companies in connection with that matter?

MR. BROWN: I may say, Mr. Chairman, that I have been advised and I believe that the fish industry at Hay River has not yet submitted any conclusive argument to either the Commissioner or the Department of Northern Affairs which would justify their considering the fishing industry as sufficiently relevant to contemplate Hay River as a terminus or relate the railway to it.

THE CHAIRMAN: I was thinking of this statement that if a railroad is available the fishing companies, you think, would be likely to transport their fish by truck rather than by rail?

MR. BROWN: That is the belief that we have at the present time.

THE CHAIRMAN: Perhaps I should put this to you: our counsel Mr. Feehan has just told me he has been in touch with one of the fishing companies and I understand he intends to submit a brief and he is in favour of the railway and they would ship by rail. Now, that is only one, and I am wondering if you have been in touch with others that indicate the contrary idea.





MR. BROWN: No, we have not. We have had no representations from them in this regard as far as I am aware.

THE CHAIRMAN: Dr. Jenness, do you know?

MR. JENNESS: I would hazard a guess that the company most likely to be called upon would be the McGinnis Products Company and I have talked to both Mr. McGinnis and his manager, not specifically on the railway question, but I know a certain amount about their operations. We have talked to various people involved in various facets of the fishing industry story on Great Slave Lake but no one has really indicated a particular interest in this railway among the fishing people at all. We base our assumption that they may not be interested or not have much freight for the railway from the fact that they have not showed us in either capacity in which we are involved any significant interest in this particular question. Their interest has been in another matter more than this and that is the question of providing refrigeration facilities up at Great Slave Lake itself. This is the one thing they have been talking to us about, not the railway question.

MR. BALDWIN: I was wondering, there are some comments on Annex "A", the original brief submitted by Mr. Robertson to the Gordon Commission; on page 1 of Annex "A" Mr. Robertson apparently thought in 1955 that the fishing industry might be interested. That is the bottom paragraph.





THE CHAIRMAN: Well, is that relevant at the moment?

MR. BALDWIN: I was just introducing it. I just noticed it was something of interest to Mr. Robertson in 1955, that is all.

MR. JENNESS: Could I give an answer to that one?

THE CHAIRMAN: Yes, of course.

MR. JENNESS: As of the present moment we are not quite sure of the status of the fishing industry in Great Slave Lake itself at all. We have been advised by some of the people engaged in fishing operations on the lake that the lake has been fished out, that it is a declining industry. Others have intimated this may not be true, that it is just over-fishing in certain parts of the lake. But, the point I am trying to make is that these types of comments are disturbing comments and are comments that have been made within the last couple of years. If anything, they tend to throw a bit of a damper on our enthusiasm for our prospects for the fishing industry. Until we have something definite to indicate they may not be correct, instead of the enthusiasm Mr. Robertson had in 1955, we are being a little bit more cautious about encouragement at this time.

THE CHAIRMAN: The only reason for my question was as to whether you had information from other companies than the McGinnis company.

MR. JENNESS: None of the others have approached





us directly at all.

THE CHAIRMAN: Then we do not have to follow it through.

MR. PORRITT: Mr. Chairman, may I say something?

THE CHAIRMAN: Yes.

MR. PORRITT: It is stated that none of the other companies have approached but have any of the other companies been approached? That is a question I would like to have answered before a statement like this is made. There is no comparison between transshipping fish from a truck to a train when you can put it directly on the train. It is a misstatement that any fishing company would be more interested in trucking than rail. If fish can be loaded directly into a freight car and saved all that handling it is in better condition because the handling is very important.

THE CHAIRMAN: We expect to have a brief from the McGinnis Fishing Company and I think we can rely on that for the information. I just wanted to make sure that Dr. Jenness had no information beyond what is stated here. If anybody has anything direct, of course, we will be only too glad to have it. You have nothing more, Dr. Jenness?

MR. JENNESS: No. In our case our direct contacts with fishing in the federal government would come from the Department of Fisheries rather than ourselves. Consequently we have been in close touch with the people in the Fisheries but not with the persons





whose names we have been talking about. It is only incidentally that I happened to be talking to one establishment.

MR. BROWN:

Other Considerations Pertaining  
to the Choice of Route

Aside from the resources brought into production, there are several other considerations which might be taken into account in an assessment of alternative routes. They include:

- (a) revenues available to the railroad
- (b) Co-ordination of rail services with other transport facilities.

(a) Revenues available to the Railroad: It could be suggested that the revenues to be earned by the railroad to Great Slave Lake are not properly a matter of concern to Northwest Territories but rather to the railways themselves. However, it is quite apparent that the railway, by either route, will not have sufficient traffic or produce sufficient revenue in the early years of its existence to enable it to be financed by the railways themselves on a straight commercial basis. A substantial amount of capital investment by the government will be required. The extent to which and the speed with which that investment can be repaid to the government will depend on the revenues the railway can earn.

Beyond this, it is reasonable to expect that





the frequency and standard of service which the railway can provide to the residents of the Territories will bear a close relationship to the revenues derived from the line. The Northwest Territories are therefore immediately concerned with the revenues that the railways can earn.

From this point of view, the analysis of prospective traffic outlined in earlier sections of this brief would seem to indicate a clear advantage in favour of a line from Waterways. This conclusion holds, whether consideration is confined to traffic available immediately on construction of the railway, or extended to include traffic arising from possible longer-term developments along the alternative routes.

(b) Co-ordination of Rail Services with other Transport Facilities: Both of the proposed railroad routes parallel an existing transportation artery into the Great Slave Lake area.

In the west, a rail extension from Grimshaw would parallel the Mackenzie Highway which runs from Grimshaw to Hay River. It would compete with it for the carriage of some commodities.

The Waterways extension of the railway would parallel the Athabasca river and, in lesser manner, the Slave river, both of which are headwater portions of the Mackenzie river system. At present, the Northern Transportation Company maintains a common carrier service on these rivers from Waterways, and operates also





on Lake Athabasca, Great Slave Lake and on the Mackenzie River. The Northern Transportation Company's Athabasca river service would probably be eliminated by the railroad, but this appears desirable because the river suffers chronically from low water conditions, particularly in the fall of the year (a depth of 3 to 4 feet is not uncommon), and it has proved to be a rather unsatisfactory avenue of commerce. The Northern Transportation Company would continue to serve Lake Athabasca, but probably from the proposed new rail-water transshipment harbour at Peace Point rather than from Waterways.

Through traffic from Waterways to Great Slave Lake by water probably would be eliminated also, but this too, is considered desirable because the Slave river is handicapped by a cumbersome 16-mile portage between Fort Fitzgerald and Fort Smith which adds a considerable expense. The railroad and river, however, are here sufficiently far apart that they would complement each other on shipments from Pine Point to destinations on the river as far as Fort Smith and on shipments from Peace Point to destinations on the river as far as Fort Fitzgerald.

Elimination of the Fort Smith portage and of navigation on the Athabasca river would remove a high-cost element from the freight rate structure of the Northern Transportation Company and should result in some reduction in its freight rates, to the





ultimate advantage of all points which it serves in the Mackenzie District and to the advantage of economic development in the entire region.

It is possible, of course, that some operational changes by the Northern Transportation Company would take place also, if the railway were to follow the Grimshaw route; but Peace Point would not be used for transshipments to Lake Athabasca, although it appears sensible to have it so used, and services from Waterways to Lake Athabasca would continue, perhaps necessitating costly dredging operation on the Athabasca river at an early date.

THE CHAIRMAN: Do you know how costly these dredge operations might be?

MR. BROWN: I do not know exactly how costly it would be but the information we have indicates that it would be a rather expensive operation. Dr. Jenness tells me the information he has that it would be measured in the millions and not in the hundreds of thousands of dollars.

THE CHAIRMAN: Millions per year or in capital outlay?

MR. JENNESS: Capital outlay; I don't know how much that would be per annum once the capital outlay were made. Also, how much it would cost, how many millions, would depend on whether you dredge it to a navigation season channel of five, six or seven foot depth. The kind of expenditure that is involved on





a first look-see is one that we in Ottawa have been rather frightened that some day we would have to face.

MR. BROWN:

Conclusion

This brief has been prepared at a point of time. Facts and estimates which appear valid today may assume a different significance tomorrow, and facts as yet unknown may assume major importance in the future. The pattern of development in northern Canada, including both the Northwest Territories and the northern parts of the western provinces, cannot now be precisely foreseen over the life of a railway. The railway itself will influence this pattern, as will increasing knowledge of resources, new techniques for putting them to use, changing domestic and international markets, and the rapidly increasing rate of development activity.

This brief has not taken into consideration advantages that could accrue to particular towns or settlements in the Northwest Territories that might be along the railway by one route or the other. To some extent these would be offsetting; the gain for the communities along the route selected would be balanced, in whole or in part, by the failure to gain in the case of communities on the route not selected. Moreover, from the point of view of the Northwest Territories as a whole, and the Great Slave Lake-Mackenzie valley area in particular, the important





criterion is the overall benefit, and not local considerations.

If the assessment is correct that both long-term and short-term freight potential and revenue-earning capacity are greater by the Waterways route than by the Grimshaw route, the Northwest Territories will benefit most by the selection of the former. The greater freight movement will be because of greater development, which is the prime object of the line and on which the future of the territories depends. The larger revenues will make possible better and more frequent service.

It is, of course, recognized that your Commission will necessarily have to take into account other considerations of no particular territorial concern. Whatever route is chosen, the existence of a head of steel on the shores of Great Slave Lake will give a tremendous stimulus to the economic growth of the Northwest Territories.

THE CHAIRMAN: I would like to ask a few questions -- Mr. Gainer, have you any questions?

COMMISSIONER GAINER: No, you go ahead.

THE CHAIRMAN: You have mentioned the Mackenzie Basin a couple of times in your brief but you have not developed the benefit that might accrue to the Mackenzie River Valley from this railway. Could you give us any help along those lines?

MR. BROWN: The Mackenzie River Basin is the Mackenzie Valley through to the Arctic.





THE CHAIRMAN: Are you hoping for much development in the Mackenzie River Basin as a result of the railway?

MR. BROWN: I would not say so. It is difficult to predict what developments might take place down the Mackenzie River. The benefit that the railway would have, the immediate benefit would be the question of a surer supply of commodities from the railway, the benefit of the whole system from waterways and it is hoped that it would be economic. A considerable amount of saving on freight would be considered on the waterways down the Mackenzie River thereby benefiting that area to that extent.

THE CHAIRMAN: We have talked a lot about the mining prospects of the Precambrian Shield, that is over to the east. The Mackenzie Valley itself is to the west?

MR. BROWN: Yes, that is right.

THE CHAIRMAN: We have heard very little of what development we might hope for in the Mackenzie Basin. I am just wondering if you could give us any help along those lines? There is a lot of timber there, for instance.

MR. BROWN: There is timber, yes.

THE CHAIRMAN: Is it too far away to be economically worthwhile?

MR. JENNESS: Could I make a comment? By "basin" we are referring in the brief to a drainage





basin, not a structural or sedimentary or petroleum basin or anything of that kind. Consequently the words "Mackenzie River Basin" is the Mackenzie River Valley itself plus the lakes, Great Slave Lake in particular. As we see it from an economic point of view there are really three keys to the development of the North, one of which is the availability of mineral in commercial quantities. The second thing is the availability of transportation, that is, sufficiently low cost transportation that you can afford to develop the mineral deposits that exist there. The third key is power and consequently the big thing about the railroad from our point of view is looking at it from the point of view of development of the Northwest Territories if it provides cheaper transportation between southern Canada and the Northwest Territories than exists now with truck traffic to Great Slave Lake or water traffic to Great Slave Lake from Waterways which will be providing cheaper transportation -- to that extent the possibility of developing the minerals that are available to the North. The bonus factor in the whole thing is the water that is available for generation of power at Fort Smith, the petroleum and natural gas which can conceivably be proved and provide other forms of power in the North. The big stumbling block would seem to be the transportation question.





THE CHAIRMAN: What would you say about the area that can be served, from a transportation point of view, by the Mackenzie River itself and some of the rivers that flow into it, such as the Liard?

MR. JENNESS: Lower freight rates respecting the south shore of Great Slave Lake can benefit the whole of the Mackenzie valley, to some extent.

THE CHAIRMAN: Is there much development you hope for in the area immediately tributary to the Mackenzie River and the rivers flowing into it?

MR. JENNESS: Well, I mean, there are really only two things that could contribute to economic development. One is the possibility of developing timber resources that may exist. That will be primarily along the river itself. There are some timber resources of merchantable quality as far north as -- well, north of the Arctic circle and right almost to... Do I have a map here that shows the places? -- There are merchantable timber resources further south. The problem there, as I see it, is that the market in the north for northern timber is going to be extremely small unless development moves at a much more rapid pace in the north, and it will continue to be relatively small for quite a long time to come, in my estimation; so that any significant forest development north of Great Slave Lake would have to depend on movement southward; and I can't see that happening until commercial forests in northern Alberta and northern Saskatchewan are developed; and on





that basis I don't see the market in the south being large enough for all these resources.

This leaves us with minerals, and the main incentive in the Mackenzie River valley itself at this time is oil and gas exploration; so that how much real development you can get in the north in the Mackenzie River with the railroad I don't know, actually, because where are you going to market your oil and gas if it is proven out?

The market pattern of Imperial Oil at Norman, perhaps, gives us a little bit of a clue, but you are going to have to go outside Canada; and I think that in the Mackenzie valley itself, just sort of talking off the top of my head, it is not going to be there that you are going to get any great new development as a result of the railroad; but there will be lower cost of supplies to any oil and gas fields that are going in, and any other developments that take place there, which, of course, stimulate that kind of development; but it won't be really the cause of it, perhaps.

THE CHAIRMAN: You don't consider the Mackenzie River valley as being of great significance at the present time with regard to the location of the railway, I take it?

MR. BROWN: I think that is a correct assumption, Mr. Chairman.

THE CHAIRMAN: Have you considered the question of harbour facilities on the south shore of Great Slave Lake, and, with regard to that, where the railway should go?





MR. BROWN: That is a matter which, I think, I would prefer not to try to comment on, because I doubt if anything I could say would be of very much assistance to the Commission.

From the information which I do have I believe that it is considered possible to construct a suitable harbour at Dead Man's Island close to Pine Point; I also believe it is possible to utilise the existing harbour at Hay River, with the problem there of the shifting sand bars outside of the harbour itself still a problem which, I understand, is not entirely solved, but I don't suppose it is insurmountable. I believe, in either case, should either be selected, or used, I am under the impression that there would be substantial expenditure of funds required to actually make a suitable harbour in either place. But I have no further details, or I have no details of it here.

THE CHAIRMAN: Are the shifting sand bars worse at Hay River, do you think, Mr. Brown, than they are at the entrance to the proposed harbour at Dead Man's Island?

MR. BROWN: I am afraid I can't elaborate on that. I am not sure of any shifting sand at Dead Man's Island because it has never been operated, and I doubt if they have any information that would indicate whether there was actually a problem there in that respect or not. They do know that there is a problem at Hay River.

MR. JENNESS: The only comment I might add is that I don't know of a single good harbour on the whole





south shore of Great Slave, including Hay River; and I think any harbour you pick is going to have to have fairly considerable harbour improvement work performed before it is actually completely suitable for the kind of operation that is involved.

Even at Hay River there is constant dredging goes on, as I am sure everybody here knows, each year by the Department of Public Works in order to keep the harbour area open; so that this is definitely envisaged, no matter where the rail terminus on the lake is located and the Department of Public Works -- I don't know the details of their studies, but they have studied the prospects.

THE CHAIRMAN: I think we can get that information from the department, but I didn't want to pass the subject without asking if you could help us on it.

COMMISSIONER GAINER: Do you know offhand whether these studies have included Fort Providence -- the Department of Public Works' studies?

MR. JENNESS: I am not sure.

MR. BROWN: I don't know whether they have investigated it.

COMMISSIONER GAINER: You would think, though, that the major studies that have been done have been done by the Department of Public Works? Would that be the right way to put it?

MR. BROWN: Yes, that is right.

THE CHAIRMAN: I am going to suggest that we





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have an adjournment. Mr. Feehan is the Commission counsel, and I think some of those who are taking an active part in connection with the hearings might like to ask him to pursue some lines of questioning, and I think the adjournment will give them an opportunity to discuss the thing with Mr. Feehan.

--- A short recess.





THE CHAIRMAN: Have you any questions?

MR. FEEHAN: I have some questions, sir.

THE CHAIRMAN: I assume that you may be able to ask questions of both Mr. Brown and Dr. Jenness and either one or the other will answer as they see fit. Is that satisfactory?

MR. BROWN: Yes.

MR. FEEHAN: Dr. Jenness, firstly, I wish to explain to you that I have been asked to ask these questions, and since your brief has been submitted as the brief of a disinterested party, I have been asked to question you regarding some of the statements which are made in it and to which there has been, in some cases, evidence which would seem to contradict the material which is in your brief.

Dealing firstly with the matter of lumber, you seem to have written off the western route regarding the lumber industry as a whole, and I would refer you to the Northwest Territories brief on economic prospects submitted only three or four years ago, and particularly to page 26 of that brief which reads:

"Furthermore, a railway to Great Slave Lake would also materially benefit agriculture and forestry in the Province of Alberta." -- this refers to the Grimshaw route, by the way -- "Good farming and forest lands exist for the first 180 miles of the proposed railway, north of Grimshaw and eastward to Fort Vermilion."

Now, we have received information that there





are two thriving and profitable lumber industries being operated at the present time in the Grimshaw area and north. Would you care to comment on that?

MR. JENNESS: Might I ask you what companies they are first?

MR. FEEHAN: One would be the Grand Prairie.

MR. BALDWIN: There is the Northwest Lumber Company Limited and there is the Ken Fisher who gave evidence up in Peace River.

THE CHAIRMAN: Mr. Fisher's company.

MR. BALDWIN: I think he operates under the name of Ken Fisher Lumber Limited.

COMMISSIONER GAINER: Is this the one that is backed financially by Northwest?

MR. BALDWIN: Yes. The Mitchell Lumber Company was referred to. I don't know whether that is an incorporated company or not. Then there is the Northwest, which I do believe may well include Fisher. I am not prepared to say whether one includes the other. I know those three companies definitely.

MR. JENNESS: We hadn't in any way attempted, as you put it, to write off the possibilities of lumber industries in Alberta at all, because, as we pointed out in the brief, if you refer to page 8 of the Commissioner's brief, there is actually a greater acreage of productive forest on the western route than there is on the eastern route, not counting the rather peculiar activities in the park. I think the lumber possibilities are good on the





western route. We are simply trying to point out that in both areas, as we mention on page 9, the productive forests are rather marginal for operations in the sense that both are rather remote from potential markets. If you take one specific type of wood commodity, the production of plywood, there is apt to be the handicap of foreign competition for some time to come. I know in Ottawa, until the recent agreements with Japan, more plywood was coming from Japan than plywood made right in Ottawa itself. So the lumbering operations in Northern Alberta may not, in the foreseeable future, and probably not in the foreseeable future, develop to support lumber in the area; and where there are at present lumbering operations, you have more likelihood of a continuing operation and development than where you haven't got anything in the first place.

Is it permissible to refer to a brief which hasn't been given but which was handed to me? This is the British Columbia Government brief. May I sort of take one sentence and paraphrase it on page 8 of that brief, relating to mining? There is the sentence at the very top which says: "It is obvious that until actual mining operations on a commercial scale are undertaken in the area, no rail traffic of any significance will be generated."

I would simply like to introduce, instead of "mining operations", the words "lumber operations" and make that read: "It is obvious that until actual lumber





operations on a commercial scale are undertaken in the area, no rail traffic of any significance will be generated."

The information reaching us is that on both routes there is a good possibility for woods operations. Our information is that on the eastern route the forests on the eastern side are better than those on the Grimshaw side when it comes to lumber itself, saw logs, that kind of thing.

MR. FOUKS: You mean in quality?

MR. JENNESS: In quantity primarily. Quality I am not qualified to speak of; I am not a forest biologist or whatever you call them.

Secondly, when it comes to pulp operations it is about a saw-off between the two, one is about as good as the other, and the advantage in the case of plywood, which we feel is rather marginal on the Canadian market, would tend to be on the western side. But we haven't by any means attempted in our brief to dismiss the possibilities of development on the western route. In fact, if the railroad should follow the Grimshaw route eventually instead of the Waterways route, I would say that the forest industry is its major traffic or major development potential. We have rated it second when it comes to the eastern route.

THE CHAIRMAN: What do you rate it first on the eastern route?

MR. JENNESS: The minerals development, sir.

This is not next year or the year the railroad is built, but





on both the short and long-terms there seems to be more potential for traffic in mining on the east than anything else; on the western route, insofar as it relates to the railroad, the one/would be given top priority would be forestry.

MR. FOUKS: Mr. Chairman, I wonder if Dr. Jenness would be more specific as to mining?

MR. JENNESS: Well, you can't be very specific about things that really haven't been discovered or thoroughly explored yet, and I don't intend to be because that would be totally misleading to everyone concerned by and large. We hope to find mineral developments taking place in the area that would generally be spoken of as the Canadian Shield as it has taken place in so many parts of the Canadian Shield. We also hope to get a report in the case of the sedimentary plains, and it is certainly our view that the eastern route is located where there will be new developments in minerals and with some evidence, some surface evidence indicating that those minerals may be there; whereas there is no evidence on the western route where there is oil and gas which does not seem particularly relevant to the railroad in question to us.

MR. FEEHAN: We have received three briefs regarding the lumber industry to date. In all three cases the intimation or the evidence was that the advent of a railway to either course would double the output and there would be no marketing difficulties on either the east or the west route if the products were brought to the Toronto





markets and eastern markets.

MR. JENNESS: We have received basically the same information from the companies whose existence we know of, that they foresee being able to market their products successfully. Whether this would be true for new companies coming in beyond that -- in other words, suppose you have, let us say, a handful of companies in operation today, if you double that quantity, whether they would all find markets I can't say, because I don't know their detailed operating statistics sufficiently well to know how profitable their operations actually are. An area that may support several forest industries may not support any beyond that. But I think it is quite valid to say that on the information we have received those companies are marketing their products successfully in eastern Canada and in the United States.

MR. FEEHAN: We have also had evidence, and, I believe, in the Denny report, that the lumbering industry on the eastern route is presently losing money and in some danger, and in the event that a railway is not built along the eastern route there is some possibility that the whole lumbering industry would be closed down in that area. Would you like to comment on that?

MR. JENNESS: What is it you would like me specifically to answer? Perhaps my difficulty in understanding the question is just having arrived last night; I haven't seen any of the previous briefs. Is there a particular reference in here which relates to your question?





MR. FEEHAN: The reference I would like to make is that the construction of a plywood plant would depend on the construction of a railway. I can't quite locate it at the present time?

MR. JENNESS: Well, insofar as a plywood operation is concerned, we actually haven't taken it into account at all in our submission as being a possibility; that is something that -- what a company says they would like to do and what a company plans to do and what they actually do may be three different things. And it applies to this whole railroad question in that we are talking about things which we hope will happen, and that is one of the reasons why we have come here with what we hoped was a reasonable evaluation of the pros and cons rather than any detailed analysis of the things which were, at best, pure guestimate.

MR. FEEHAN: Most of the lumbering industry on the east route is confined to the Wood Buffalo National Park, and I believe that they are lumbering in that particular area due to an order-in-council which was passed or to several orders-in-council which were passed some time ago. Is there any possibility that these orders-in-council may be expanded to include mining in that area?

MR. JENNESS: Are we permitted to say "No comment," as this is supposed to be the Commissioner's brief rather than a departmental one?

THE CHAIRMAN: I think so, yes. Well, I think that if you would rather not comment on that, we are not





going to press you.

MR. BROWN: We can't comment on that, Mr. Chairman.

MR. JENNESS: The only thing I think we should comment on at this time is that it is a special kind of national park; it is rather different from most national parks in Canada.

THE CHAIRMAN: Is there somebody who wants to put a question?

MR. FEEHAN: I am quite satisfied with that, Mr. Chairman.

MR. BALDWIN: Well, I will make some reference to it later on, Mr. Chairman, when I have an opportunity to canvass the question.

THE CHAIRMAN: Would you like to do it now?

MR. BALDWIN: Yes. The reason I think it is of some significance is that on page 8 of the brief which has been read by Mr. Brown there is this statement at the latter part of the paragraph which is carried on on that page: "Additionally, if restrictions on mining in any of the area now comprising Wood Buffalo Park are lifted, an available gypsum deposit near Peace Point can be brought into production."

It seems to me that this has been raised by this brief and made quite pertinent in a hint which looks to me as if there is a suggestion that it might well be that the restrictions in the park might be lifted, and I think either Dr. Jenness or Mr. Brown might well say (a) if that





is part of the thinking of their department at the present time, or (b) if there is no thinking about it at all, or (c) if they would rather not comment. I think, because of the statement in their own brief, it is fairly pertinent.

MR. JENNESS: Well, there has been thinking about it, but the situation has not arisen and so the thinking has not gone to the point of any actual decision and possible alternative courses. I think Mr. Baldwin will realise the status of Wood Buffalo Park to know what is possible and what is not possible in that particular instance.

MR. BALDWIN: Of course, when it was stated that this was a special kind of national park, I thought that might be of some significance. I had assumed that your national parks were covered by the National Parks Act. This is a point where the doctor might not like to comment -- it is a legal point, but I would like to know from him if his thinking is along the lines of the question asked by Mr. Feehan, that the ability to explore and develop mining possibilities in a national park may be undertaken by amendments by order-in-council.

THE CHAIRMAN: It seems to me that that is a matter of regulations which you are probably, or should be, in a better position to do than Mr. Jenness is.

MR. JENNESS: I have a preference not to comment simply because I am in the kind of strange position of wearing two hats. I am actually a member of the





department, but I am here as economic adviser to the Commissioner of the Northwest Territories. I am not authorized to speak for the department, because the brief does not necessarily reflect the department's whole thinking on the matter.

MR. BALDWIN: We have covered that, apparently. At least we have come to the end of the street on it.

COMMISSIONER GAINER: Without inquiring into the thinking of the department or any embryonic policy on it, would it be fair to ask you to tell us what the difference is between this national park and any others?

MR. BROWN: Yes, I could, Mr. Chairman, explain the difference between this park and other national parks. This is a national park and controlled under the regulations of the National Parks Act, but its purpose is different from other national parks in that the basic requirements of a national park and the purpose of it are to preserve a specific and specified area in perpetuity in its natural state for the pleasure and convenience and enjoyment of the people for ever so that it is a part of Canada that is preserved and not allowed to be interfered with, generally speaking.

The purpose of the Wood National Park was not for that at all when it was established; it was to provide an area in which a herd of buffalo could be protected and preserved as a species of animal which was becoming extinct on this continent, and therefore its whole purpose was to have a game reserve for these buffalo in this park at the





time.

The other difference is that this particular park is administered by the Northern Administration Branch of the Department of Northern Affairs, whereas all other parks are administered by the National Parks Branch, which makes a considerable difference in the approach to the parks themselves.

COMMISSIONER GAINER: I think it is helpful to know this, if one small extension of what you have said in your first statement, the first difference, is contained in the Act. Is that set out in the Act, the purpose of Wood National Park in contrast to others?

MR. BROWN: I am afraid I can't say specifically where it is set out or if it is set out in the Act in which it is incorporated.

COMMISSIONER GAINER: So it is not quite clear whether this is a matter of administrative interpretation or whether these differences have been specified.

MR. BROWN: I can't tell you where it is explained, although that is the situation.

MR. BALDWIN: May I say, sir, that I was interested in this, but by a thorough and scrupulous examination of the Act I can find nothing which permits any differentiation of the types of national park, and I wonder if Mr. Brown could comment on this.





THE CHAIRMAN: Could I ask you this, Mr. Baldwin? Is the question of the change or any change in the restrictions, is that a question of change in legislation or in regulations?

MR. BALDWIN: My opinion is that there might be some colour, at least natural change of regulations in the Forestry Act but as far as minerals are concerned any change or any change in the nature of the park would have to be by legislation. I might say in following the history of this park backwards to 1922, I observe it was first brought in as a forest reserve and later it was lifted to the status of a national park. I think, from about 1930 onwards it has been referred to in the schedule of the National Parks Act as one with Jasper, Banff and so on. It is in entirely the same category and it was put into that category from what it had previously been which I think was a forest reserve under the old Federal legislation.

THE CHAIRMAN: Then if a change were made with regard to restrictions on mining it would be a change in legislation. Well, Mr. Baldwin, it seems to me the question should rather come from Mr. Brown to you rather than the other way because you are a member of the House of Commons and I think you are in the better position to know what the House of Commons is going to do.

MR. BALDWIN: I wish Mr. Brown would ask me and I would tell him what I would do. I would not have mentioned it but it was brought up in the brief and I





thought it should be the subject of at least this much discussion. Maybe we have cleared the air a bit.

THE CHAIRMAN: What do you think Parliament is likely to do?

MR. BALDWIN: Well, if my powers of advocacy, my words are given wings, possibly the legislature would refuse to amend the Act. That would be my opinion and my view. I could enlarge for some time on that but possibly I had better not.

MR. FEEHAN: Have you any information, Dr. Jenness, of the reduction of the stumpage fees which are being charged Swanson Lumber Company and Denny Lumber Company in the Wood Buffalo Park area?

MR. JENNESS: I do not know -- do you?

MR. BROWN: No.

MR. FEEHAN: Would you be prepared to question the fact that a reduction was made in order to make these two operations economically feasible?

MR. BROWN: I would not want to comment as to the reasons why the reductions were made. I would have to consult with some administration branch for that answer.

MR. JENNESS: This is something I just do not know the answer to at all.

MR. FEEHAN: I do not suppose you would have any information on the financing operations of Denny Logging Company?

MR. JENNESS: I have no specific information. I have heard Denny is being successful in obtaining finan-





cing, but the last three questions are all questions that have not come to me in any capacity to look into.

MR. FEEHAN: I have nothing further, thank you.

MR. FOUKS: Nothing, Mr. Chairman.

THE CHAIRMAN: Mr. Baldwin, any other questions?

MR. BALDWIN: I would like to make a number of comments with a possible reply on matters which have been disposed of. I will simply go through my interpretation of certain facts and I am quite sure Mr. Brown and Dr. Jenness might well like to respond. Covering the situation of the logging which Mr. Feehan has been questioning Mr. Brown about, I would like to refer again to the brief of the Commissioner on page 9:

" In this connection it is probably significant that no large scale wood operations are being carried out at the present time in forested areas on the Grimshaw route whereas two companies are both currently in operation on the Waterways route."

It may well be that the author of this brief did not intend to convey the impression, as seems to be the case, that so far as the eastern route is concerned there are successful logging operations being carried on and there is nothing of significance in the west. I would like to make this as a statement of fact that on April 28 of this year several questions which I had asked in the House of Commons were answered. These were tabled on that particular day. I was referring to logging operations in Wood Buffalo National Park and I received





information as to the basis on which these operations were being carried out. One of the questions I asked was as to the extent to which these logging operations had been successful, that is to say, how many feet of lumber had been cut and marketed. The reply was, and I am quoting from memory, insofar as Swanson Lumber was concerned that in their operations from 1955 or 1956 until that date, April 28, it was somewherein the neighbourhood of 28,000,000 board feet. In connection with Denny Logging Company it was between two million and three million feet. Apparently that would cover the period of two or three years from the date the licences were first issued.

I would call to the attention of these gentlemen the fact that briefs were presented and evidence given unequivocally stating that during the current year 29,000,000 feet of lumber were brought down and marketed at Grimshaw from the area which would be served north of Grimshaw and they anticipated that there would be 33,000,000 feet during the current year. Perhaps this is unfair, Mr. Brown may find it difficult to answer that because he may not be supplied with the information. But, in the light of what has been said here I think I should make that statement and ask if there is any comment on it.

MR. BROWN: Well, Mr. Chairman, I am not in a position to deal with the facts and information that have been given to you relating to the operations in the area which would be served by the Grimshaw route. The brief was prepared on information that was available at





the time it was prepared and that is as far as I can go.

THE CHAIRMAN: You have no reason to question the evidence we have already received that some 30,000,000 feet is being harvested this year in that area north of Grimshaw?

MR. BROWN: No, we have not heard of it but I cannot possibly question it.

THE CHAIRMAN: Is that satisfactory?

MR. BALDWIN: Perfectly.

MR. GRIMBLE: Could I comment on that? Mr. Hamilton told me after his appearing here that he agreed that 30,000,000 board feet would be produced by a railway north of Grimshaw and he also said 50,000,000 board feet would be produced on the eastern route. But, he said, "I failed to mention that in my opinion 10,000,000 board feet would be produced north of Grimshaw in any case due to the fact the highway was there."

THE CHAIRMAN: The evidence is that 30,000,000 feet are being produced anyway and that an additional 30,000,000 feet would be likely to be produced after the railway was there.

MR. GRIMBLE: I think you asked Mr. Hamilton this question: "Do you think it is reasonable that 30,000,000 feet would be produced north of Grimshaw?" He said, "Yes." In his estimation he has worked near north of Grimshaw. Afterwards the comment was made asking if he thought it was reasonable with the railway 30,000,000 feet would be produced north of Grimshaw





and he said, "I neglected to add to my comments that 10,000,000 would be produced in any case."

THE CHAIRMAN: He may have misunderstood but I intended to ask him if he thought there might be an additional 30,000,000 feet produced if the railway were built. It happens that the additional amount is the same as the amount now being produced and that might have led to some confusion.

MR. GRIMBLE: Possibly the answer is the 10,000,000 additional board feet would be produced; 30,000,000 would be produced but 10,000,000 would be produced anyway.

THE CHAIRMAN: I think the evidence is that 30,000,000 would be produced anyway but the estimate is 30,000,000 additional.

MR. FOUKS: So there would be 40,000,000 board feet being produced anyway.

THE CHAIRMAN: I see, the additional 10.

MR. GRIMBLE: Yes.

THE CHAIRMAN: Are you gentlemen satisfied with the evidence as to timber?

MR. BISHOP: May I ask for my own information how far north of Grimshaw is the present production of timber and how far north would be the expected additional 10 or 30 depending on whether it comes by road or railroad? What I am getting at is, are we talking about lumber operations that can be served by the present facilities to a great extent or are we not?





MR. BALDWIN: The present logging operations are carried on and the minimum is around 60 or 70 miles but some of them up to 150 miles. I think you will recall the Honourable Gordon Taylor was good enough to say he did not get from his deputy further particulars of that. I cannot go beyond that general statement. It is certainly not through operations close to the railroad, that is not it at all.

MR. GRIMBLE: I can add something. Mr. Hamilton said in his opinion since he is operating in that area they could operate 110 miles north of Grimshaw without a railroad.

MR. FOUKS: He did not say that in evidence.

MR. GRIMBLE: He will give us a letter to that effect.

MR. FEEHAN: I just have one more question. I would like to ask Dr. Jenness if I understood him correctly when he said the most important reason given for starting the easterly route is the speculation that minerals may be discovered along that route or in this vicinity.

MR. JENNESS: I will turn that question around a little bit because I do not think our briefs specifically point out a preference for either route. What it does do is to indicate the pros and cons under which particular reserves and -- to put it another way, even though you were to assume that both routes were equal on the basis of all other resources except minerals, the presence of minerals on the eastern route or the expect-





tation of minerals developing on the eastern side would seem to indicate an advantage for that particular route. We have not specifically come to that conclusion because it may well be there is evidence that this Royal Commission will receive from sources other than those available to us that will either make the eastern route even more attractive than we found it to be at the present time or will make the western route more attractive than we recognise it to be at the present time.

MR. FEEHAN: I was under the impression that was the foremost reason for your advocating the eastern route.

MR. JENNESS: The eastern route has not been pushed forward, we feel it is a better route on the information given to us.

THE CHAIRMAN: Dr. Jenness, this may not be a fair question to put to you because this pertains to geology but Dr. Riley is here this afternoon and he gave us a brief this morning in which he pointed out -- if I am wrong I hope Dr. Riley will correct me -- he pointed out after doing a great deal of work in the area between Lake Athabasca and Great Slave Lake, it appeared to him that there is not much available prospecting ground except a considerable distance east of the Slave River. Do I put that fairly, Dr. Riley?

MR. RILEY: Yes, I think so.

THE CHAIRMAN: Have you any opinions or information that will throw any light on that opinion of Dr.





Riley?

MR. JENNESS: Well, I have one comment I would like to make and while I am not a geologist and consequently cannot speak as though I were, the information available to us from geologists in Ottawa is that that is essentially correct, that there is a large stretch of area roughly north of Fort Smith and to Great Slave Lake that is not particularly promising. If you would refer to the map in our brief, considerably to the east of the proposed railway there is an area which our geologists in Ottawa feel to be very promising, sufficiently so that there is contemplation of the construction of a road that would go through that mineralized area from roughly Fort Smith to the eastern end of Great Slave Lake in the offing under our development roads program. That is shown on the map.

THE CHAIRMAN: That road would go through the area wherethis discovery has been made?

MR. JENNESS: Where we feel the area shows considerable promise of mineralization and that road would not tie in with a railroad other than on that eastern route.

MR. RILEY: That would go through about that area that I mentioned this morning where the green area was that we marked as available.

THE CHAIRMAN: Yes.

MR. JENNESS: So in that sense, the road plus the railroad on the eastern side would tend to contribute a bit more to an integrated transportation network in





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that area.

THE CHAIRMAN: An area that is known to be available for prospecting.

MR. JENNESS: On the basis of information we have at the present time.

THE CHAIRMAN: Is that fair, Dr. Riley?

MR. RILEY: Yes, I think so.

THE CHAIRMAN: I am not looking at your map but another one that has the same area marked in it. How soon is it anticipated that road will be built?





In that sense the road plus the railroad on the east side would tend to contribute a little bit more towards an integrated transportation network in that area.

THE CHAIRMAN: Is the area known to be a favourable area for prospecting?

MR. JENNESS: On the basis of present knowledge, as I understand it.

THE CHAIRMAN: Is that a fair way of putting it, Dr. Riley?

MR. RILEY: Yes.

THE CHAIRMAN: I am not looking at your map, but I am looking at another that has the same area marked on it.

MR. RILEY: Yes.

THE CHAIRMAN: How soon is it anticipated that that road will be built?

MR. JENNESS: It is not scheduled for this year, but it is a subject that has been in our thinking; it has been in our planning on the roads programme. It could be scheduled the moment we know what is going to happen the railroad; but it will be built in any event. It is one of these things that isn't in our schedule for construction this year. It is something I have to guess at. I am not going to try to suggest a date when it will actually be started.

THE CHAIRMAN: Yes.

MR. JENNESS: The mere fact that we are considering it sufficiently highly to present it on our map





is intended to indicate that we are giving it relatively high priority in our thinking, even although we haven't set a date for its initiation.

THE CHAIRMAN: I wonder if we could have a look at the map that was marked as an exhibit this morning?

Dr. Riley, would you mind coming up here? This is the map that Dr. Riley produced for us this morning. I take it that these are the routes that you have in mind (indicating)?

MR. JENNESS: From approximately Fort Smith to approximately Fort Reliance, through what is considered to be a favourable mineralized area. I don't know if the geologists call it greenstone -- is that correct, Dr. Riley?

MR. RILEY: It is largely a sedimentary area.

MR. JENNESS: But also as part of our programme there is a road, of course, contemplated across the north here that is being scheduled from Yellowknife over to Fort Reliance; so that there will be a complete connection between every area there.

MR. FOUKS: May I ask if Dr. Jenness would tie that in with the railroad?

MR. JENNESS: If the road is built there will be a direct tie-in. The road quite possibly will be built whether or not there is a railroad. If there is a railroad obviously the two will tie in, provided the railroad is on the eastern route.





MR. BALDWIN: Did you say it was on this year's estimates?

MR. JENNESS: It is not on this year's estimates.

THE CHAIRMAN: You say the road possibly will be built in any event, Dr. Jenness?

MR. JENNESS: Well, I think I can say that it will unquestionably be built, but I don't know how soon. If we are talking of two years it may not be built; if we are talking about twenty years it will, quite conceivably, have long since been built.

MR. RILEY: Might I ask what would be the purpose of that road?

MR. JENNESS: It is a development road. It is intended to contribute to any mineral development in the area which looks promising from the point of view of mineralization.

It is one of the cases in which Mr. Hamilton, in his development road programme -- and that is my Mr. Hamilton this time -- is trying to encourage the development of the Northwest Territories through pushing the means of access in now so that public or private investors will take a closer look and, we hope, find something. It is part of his total road programme concept.

MR. RILEY: I felt this morning that the thing could be accomplished by the use of small aeroplanes.

MR. JENNESS: But they won't haul out anything





you find.

MR. RILEY: No; but my suggestion was after you found it.

THE CHAIRMAN: Are there any other questions?

MR. BALDWIN: I have a very simple final question. It is something that has been troubling me all the way through these last two or three days.

On page 17 of the brief of the Commissioner there are two statements about the middle of the first paragraph. It says: "The Northern Transportation Company's Athabasca River service would probably be eliminated by the railroad . . .". And in the next paragraph: "Through traffic from Waterways to Great Slave Lake by water probably would be eliminated also . . .".

Now, I have heard that statement -- I think it has been thrown out on several other occasions by other people presenting briefs -- and I was concerned, and I will be interested in finding out if Mr. Brown could answer this question: Have the railroads, in their appraisal of this situation, hinged their acceptance of the eastern route on the elimination of competitive water transportation, and if the Department of the Commissioner thinks that is satisfactory?

MR. BROWN: I can't say, Mr. Chairman, as to what representations have been made, or what negotiations have taken place, between the railroad and Northern Transportation Company in regard to what action





might be taken should a railway be built on the eastern route.

The brief suggests the probability of eliminating the water route from Waterways to the lakes, being of the opinion that the railway would be a duplication of it and would be more economic in the long run. It is simply a logical deduction from a presumed set of facts.

I cannot go any further in explaining the basis of this particular sentence in this paragraph than that.

MR. FOUKS: Would you recommend the elimination of competition, Mr. Brown?

MR. JENNESS: No, not at all; it is simply that it would be more efficient.

MR. FOUKS: We have evidence that since the P.G.E. went in competition was an advantage because the rate on wheat had been dropped substantially immediately. This would seem a contradiction to that approach.

MR. BROWN: It may be possible that it is not well founded, but that was our view.

MR. JENNESS: This is actually a question which, I think, could more fairly be put to the railways, and I think it could be answered by the railways, as a question of what would any offer they would make to contributing to the cost of constructing the railroad be contingent upon.

THE CHAIRMAN: That seems so to me, too, but we are in this position, that we have only one opportunity of asking everybody who comes here, and





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some times we are able to get some assistance that we don't expect. We have asked a lot of questions to see if those who are here can help us with regard to these questions -- at least, I have.

It does seem to me that that is a problem that we can best solve by asking the railways and the Northern Transportation if we feel we want to look into it.

But the question has been discussed time after time, and I am glad Mr. Baldwin raised it.

Are there any other questions?

We have not been in the habit of having cross-examination of the witnesses other than by the Commission's counsel, but in view of the special circumstances I think we have relaxed it a bit, and I hope Mr. Baldwin and Mr. Fouks are quite satisfied.

MR. BALDWIN: We are perfectly satisfied most of the time to bounce them off Commission counsel!

MR. FOUKS: I hope we haven't abused the privilege.

THE CHAIRMAN: We will have a very short adjournment -- five minutes at the outside.

---A short recess.





SUBMISSION OF  
VANCOUVER BOARD OF TRADE

Appearances:

Mr. R. T. Elmer

Bureau Secretary  
Vancouver Board of Trade

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THE CHAIRMAN: This is Vancouver proper, isn't it, Mr. Elmer?

MR. ELMER: Yes, Vancouver.

Will I proceed?

THE CHAIRMAN: Yes.

MR. ELMER: I might say at the outset that we don't attempt to get into any technical details in our presentation, but these will be covered, I believe, by the British Columbia Government's brief and any witnesses which they might call tomorrow.

THE CHAIRMAN: Yes.

MR. ELMER: We have endeavoured to approach the subject in a broad and general manner in an effort to be of assistance to the Commission.

THE CHAIRMAN: Yes.

MR. ELMER:

Proposed Rail Routes to Pine Point, N.W.T.

This submission is written on the premise that a railway line will be constructed to Pine Point on the south shore of Great Slave Lake as an extension of the Northern Alberta Railways.





Two routes have been proposed, namely, (a) western route, from Grimshaw, Alberta to Alexandra Falls and thence to Pine Point; (b) eastern route, from Waterways, Alberta, west of Lake Claire and on to Pine Point. There are many things which must be considered in order to arrive at a conclusion as to which would be the better route.

They include:

1. Development of natural resources.
2. Population served by each route.
3. Construction costs.
4. Transportation routes presently serving the area.
5. Traffic patterns.
6. National defence.
7. Possible connections with other transportation routes.
8. Available and potential traffic.

A Royal Commission appointed by the Government of Alberta concluded an exhaustive study of the entire area. The results of the survey were published in the Report of the Royal Commission on the Development of Northern Alberta, dated March, 1958. Many of the statistics used in this submission are taken from the publication and are symbolized (1).

In an attempt to outline factors that are of importance to B. C., which were not shown in sufficient detail in the Alberta Royal Commission Report, the Government of B. C. prepared a report entitled "An





## Economic Appraisal of the Proposed Rail Routes to Pine Point N.W.T.".

The following observations are based on the text as developed by the Royal Commission, the B. C. Government Report and the technical experience of the Railway Rates and Services Committee of the Vancouver Board of Trade.

### 1. Development of Natural Resources

#### (a) Mining:

The Consolidated Mining and Smelting Company Limited are reported to have proved up large tonnages of very high grade lead and zinc ores in the Pine Point area. It is presumed that initially the lead and zinc mined at Pine Point would be hauled out in concentrate form destined for Trail, B. C. The logical route for this movement is through Edmonton then via C.P.R. to Calgary thence to Trail. Both the eastern route and the west route would serve Pine Point. The only other known practicable deposits of any size would appear to be gypsum in the Wood Buffalo Park area and the uranium deposits along the north shore of Lake Athabasca. These latter deposits would be more adequately served by the eastern route.

The Royal Commission Report states, on page 27: "Except for oil and gas activities and the experimental work going on in the Athabasca tar sands, which will be treated in another section of the report, mining activity in Northern Alberta is practically





negligible . . . except for iron ore. It is only in 20 per cent of Northern Alberta -- the relatively unknown northeast corner, consisting of 25 thousand square miles -- that there is any prospect of finding metallic minerals." We can only assume from this that with the exception of the deposits at Pine Point the eastern route would better serve the mining industry. (There is considerable controversy as to the amount and exact location of available and usable iron ore which is apparently north of Dawson Creek on the B. C. Alberta border.)

(b) Forestry

The bulk of the timber cut in Northern Alberta is spruce 171,055 mfbm (thousands of board feet) out of a total production of timber of 190,295 mfbm. (1) This again is taken from page 20 and Table 12 on page 21.

Present day lumber operations are centered around the areas tributary to Grande Prairie, Faust, Peace River and Lac La Biche and are already adequately served by rail connections.

Potential development is greatest in the area that would be served by the western route as remaining timber reserves are located in that area.

(c) Agriculture

Existing agriculture in Northern Alberta is confined almost entirely to the Peace River country, there being 4,761,000 acres of arable land in that area out of a total for all northern Alberta of 5,565,000





acres. (1). Here, again, we use the statistics in the Report on page 45.

With respect to agriculture the Royal Commission report has this to say, "it appears, however, that in the vast area stretching north and south between the Birch Mountain and the 55th Parallel and east and west from the Peace River near the line of  $117^{\circ}$  west longitude to the Saskatchewan border we cannot expect to find much arable land, except in the already settled areas in the extreme southwest corner in the region of McLennan and High Prairie and extending a short distance north and east from this place some land adjacent to the lowest 75 miles of the Athabasca River (between McMurray and Lake Athabasca) would undoubtedly be good for pasturing cattle and for some farming. The same applies to land adjacent to the Slave River particularly on the west side, although this area is within the Wood Buffalo Park".





The Wood Buffalo Park is a national park and the area referred to in the preceding paragraph is the north east corner from a line straight north from approximately Peace River east to the border and north to the Northwest Territories. It is apparent that agriculture would certainly be served to a far greater extent by the western route.

(d) Petroleum Products

With the exception of the Athabasca tar sands, oil and gas development is concentrated mainly in the Peace River area. The development of the tar sands could be accomplished by means of a short railway extension north from Waterways. We make further reference to this a little later on.

2. Population

According to the 1956 census, the population of northern Alberta above the 55th Parallel was almost 74,000 people. This is taken from the Report of the Royal Commission. Some 64,000 of this 74,000 live in the Peace River area due to the almost uninhabitable conditions prevailing in the northeast corner of the province. Population generates traffic.

3. Construction Costs

According to the report of the Royal Commission, press reports have stated that the comparative costs over the two lines would be approximately the same. We understand the Canadian Pacific and the Canadian National Railways have completed surveys on





construction in the areas and have submitted a report to the federal government. So far this report has not been made public and we have no factual knowledge of the comparative costs of either route.

#### 4. Transportation Routes

As development is normally expected to follow the establishment of transportation routes, we can assume that the more routes that are established the more the country will develop. The western area is presently served by the Mackenzie Highway and the eastern route by the Athabasca and Slave River system. There is a difficult portage of approximately 16 miles on the Slave River which hinders river traffic. The rivers are frozen for many months in the year and the highway is closed for approximately two months each year during the spring break-up.

#### 5. Traffic Patterns

The proposed railway would most likely be built by the Northern Alberta Railways, a company owned and operated jointly by the C.P.R. and C.N.R. There is no reason to suppose that the N.A.R. would enter into freight rate agreements with the P.G.E. for any traffic which originates or terminates at any point served by C.P.R., C.N.R. or N.A.R. The shorter rail distance which could be attained by connecting with the P.G.E. does not necessarily mean lower freight





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rates.

It is standard practice for railways to publish competitive rates to meet competition from other railways or other forms of carriers even if they carry the goods longer distances.

Development of any area adjacent to B. C. with resultant increase in population will be reflected by increased business for B. C.

There is a definite possibility of Fort St. John and Dawson Creek becoming distribution centers for supplies shipped from Vancouver by rail and distributed by motor carrier.

(a) Minerals

As stated previously, most of the minerals from the area would be destined for Trail and would most





likely be shipped via Edmonton thence through Calgary via C.P.R. and Trail. It is unlikely that the western route would develop any additional volume of mineral traffic, whereas the eastern route could, due to more favourable geological conditions.

(b) Forestry Products

Today's market for spruce is mostly in central and eastern U.S.A. The most direct routing would be south and east through the Edmonton gateway.

Here, sir, I might interrupt myself and say that in all this we are still talking about the traffic patterns or traffic flow of all these commodities.

(c) Agriculture

It is presumed that grain shipped from the area would be primarily for export and moved under the Crow's Nest Pass Agreement Rates. These low rates will dictate the movement of this traffic via N.A.R., C.P.R. and C.N.R. via Edmonton.

I might interrupt here again to say that I did write to both the railways asking them if the Crow's Nest Pass Agreement would have any bearing at all on the location of the railway. I received a reply from both railways saying that they had made a statement to the federal government and therefore could not make any announcement at this time.

THE CHAIRMAN: How long ago was this that you wrote to them? Just recently, in the last few weeks?





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MR. ELMER: I wrote to them on June 25th. The replies are dated, from the Canadian National, June 30th, and from the Canadian Pacific Railway, July 8th.

Under current conditions, livestock would in all probability move to Edmonton, although present plans for packing houses in the Dawson Creek area might very well direct volume towards Central and Northern B.C.

#### (d) Petroleum Products

We can expect that any large development of crude oil or natural gas deposits, including development of the Athabasca tar sands, would no doubt result in construction of pipe line systems. There would, however, still be a considerable movement of refined and by-products by rail, the logical markets for such products being the north central British Columbia area and possibly northbound to the Yukon and Alaska. This information was given to us by the various oil companies whose offices are in Vancouver.

#### 6. National Defence

If the question of national defence has any bearing on the location of the railway, then the route should be that which will provide the best and most interchanges with other transportation routes, particularly those serving the northern area. Further, if national defence is a prime consideration, then greater weight should be given to that aspect than any other.





7. Possible Connections with Other Transportation Routes

The granting of statehood to Alaska will undoubtedly add considerable impetus to the improvement and development of transportation routes to Alaska, including the possibility of a railway line. The Alaska International Rail and Highway Commission appointed by the United States Government, is currently examining this entire situation. If any consideration is given to the extension of railway services from northern Alberta to Alaska, the western route would obviously provide a more flexible choice of possible connections, as well as possible connections with any future line progressing northwards through British Columbia such as the one proposed through North Central B.C.

I should like to add here that the Honourable Robert Bonner presented a statement to a recent conference in Fairbanks, Alaska, in which he outlined various proposed routes to Alaska. It may be worth the Commission's while to get a copy of that statement.

THE CHAIRMAN: Mr. Bonner will be here tomorrow, Mr. Fouks?

MR. FOUKS: Yes, sir, tomorrow morning.

THE CHAIRMAN: I think in view of what Mr. Elmer said, particularly in view of Dr. Riley's evidence, will you discuss that with Mr. Bonner?

MR. FOUKS: I will do, Mr. Chairman.





MR. ELMER:

8. Available and Potential Traffic

There are conflicting reports as to the volume of both available and potential traffic. Potential traffic, of course, is influenced by the route which the railway would take. Present reports indicate that the western route would develop more traffic than the eastern route. The Royal Commission Report states "The factor which will finally weigh most heavily in determining the choice of route, however, will be the volume of freight to be hauled. Pine Point concentrates will be hauled in either case and will make up the bulk of the load on the railway. The freight destined for or originating in the Northwest Territories and that of Pine Point will be common to each route, i.e. whether the railroad goes via Grimshaw or McMurray. The Commission has tried to estimate the amount of freight which the railroad would carry if built from either of these points of origin and has experienced difficulty in obtaining very definite estimates. It appears to the Commission that the volume of freight destined for or originating at points within Alberta, including that generated by the gypsum deposits at Peace Point, will be about equal. That being the case, it appears that the freight to and from Uranium City and adjoining areas on Lake Athabasca will tip the scales in favour of the McMurray route to the extent that the freight in sight on the route from McMurray will be 15 or 20 per cent more than if the





railroad were to start at Grimshaw."

On the other hand, the B. C. Government brief -- I am not referring to the brief tomorrow but to the statement that had been submitted previously to the federal government -- indicates that while initial traffic will be about equal by either route potential traffic in a ten-year period would result in the west route achieving almost twice the volume of the east route.

Press reports have stated that the Saskatchewan Government is considering the extension of a highway in that province to serve Uranium City. This would have a direct influence on the traffic available to the eastern route. Mr. John Taylor, M.P. for Vancouver-Burrard, in a talk to the Board of Trade, mentioned the fact that letters of intent had been filed with the Federal Government covering approximately four hundred million dollars worth of development, presumably along the eastern route. We have no factual knowledge of these proposals. It is obvious, however, that they would be of major significance in the final decision of the route. It might very well be that this would include the Pine Point development which would be common to either route and development of the Athabasca tar sands which could be serviced as stated previously by a short rail extension from Waterways or by pipe line.

#### Conclusions

It must be assumed that the railways will not





operate at a profit for some considerable time and will therefore be subsidized by the Canadian Government. The prime reason for the establishment of the railway, therefore, is for the development of Canada's Northland, which is a major policy of the present government. While it is possible that the eastern route could tap more of the mineral potential of northeastern Alberta, particularly along the edges of the Canadian Shield, the western route would open up a portion of the country which lends itself to greater development and settlement in all respects and provides a better nucleus of a complete transportation network for the entire northwest area.

We are fully aware that information which has not yet been made public, including letters of intent purported to involve amounts in the neighbourhood of four hundred million dollars, the C.P.R. and C.N.R. reports and other considerations such as national defence may well be of such import as to influence the choice of routes but with the information currently available to us we can only conclude that the western route is the more logical step in the long range development programme for our north country than the east route.

That is the brief, sir.

COMMISSIONER GAINER: Mr. Elmer, on page 8, the second last paragraph, I wasn't quite clear in your reference -- you refer to the British Columbia Government





brief which was the submission to the federal government, I presume, earlier. Do you recall the basis of the build-up in the volume over the ten-year period, or will that information be the same information in the brief to be filed tomorrow?

MR. ELMER: That will be in the brief to be filed tomorrow.

COMMISSIONER GAINER: There is nothing in the first brief?

MR. ELMER: There will not be any other, no.

MR. FOUKS: I have a copy of that brief, Mr. Chairman, if you desire a copy.

THE CHAIRMAN: Yes, I think we would like it, Mr. Fouks. Could you file it as an exhibit? Does it differ from the brief that will be heard tomorrow?

MR. FOUKS: They really shouldn't be compared, because the one for tomorrow is far more exact, there was more work done on it, and this was prepared in a hurry because of the announcement of Mr. Baldwin, and the information in tomorrow's brief is as current, up to date as possible.

THE CHAIRMAN: Would tomorrow's brief contain everything that is in that brief?

MR. FOUKS: Yes, it will.

COMMISSIONER GAINER: My question -- perhaps it would be better asked tomorrow rather than today.

MR. ELMER: The information will be in tomorrow's brief as to the traffic build-up.





THE CHAIRMAN: Mr. Feehan, have you any questions?

MR. FEEHAN: I may have, sir, just very briefly.

MR. BISHOP: I would presume, Mr. Chairman, that any questions would be better left till tomorrow, because any question we may propound may be covered, anyway, in the brief tomorrow.

THE CHAIRMAN: Well, if you wish.

COMMISSIONER GAINER: You are not suggesting, though, that the witness be held over?

MR. BISHOP: No, I don't think so.

MR. FOUKS: Mr. Chairman, the brief presented by Mr. Elmer has no direct connection with the brief presented by the British Columbia Government.

MR. BISHOP: I appreciate that, Mr. Chairman, but the present brief -- practically all the information in it comes from either the McGregor Report or the British Columbia Government.

MR. FOUKS: I don't know if that is a fair statement. Mr. Elmer may have to answer that question.

MR. ELMER: It does not come from the one that will be presented tomorrow because we did not have that at the time we made our submission.

MR. FEEHAN: Perhaps rather than ask a question I could make an observation. On page 4 of the brief which has just been presented a reference is made to population, and in particular that 64,000 of





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the 74,000 residents in Northern Alberta live in the Peace River area. I believe that the Commission has already been presented with evidence that in the particular improvement districts, particularly 138, 145, 146, 147 and 149, which would be served by a new railway, it is somewhere in the vicinity of 7,000.

MR. BALDWIN: In 1956.

THE CHAIRMAN: We will adjourn till tomorrow morning at nine o'clock.

---Adjournment.













